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Address.

SECTION ON PRACTICE OF MEDICINE.

ADDRESS OF CHAIRMAN DELIVERED AT THE FIFTY-SECOND ANNUAL MEETING OF THE A. M. A., HELD AT ST. PAUL, MINN., JUNE 4-7, 1901.

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PHILADELPHIA.

Upon those selected to guide and direct the executive work of this large and important section of the AMERICAN MEDICAL ASSOCIATION, devolves a difficult task and a weighty responsibility. The high character and comprehensive scope of the work actually accomplished by the Section, more especially during the last two decades, is a forcible reminder that lack of concentrated effort in the future will result in stagnation, if not a backward step, instead of progress. You may be assured that with these thoughts ever in mind, those charged with the office work and the preparation of the present program spared no effort to make it attractive, interesting and meritorious. I desire here to make public acknowledgment of the efficient services so cheerfully and faithfully rendered by the Secretary of the Section.

It might seem befitting a chairman's address, at first sight, to take a retrospective view and consider the progress of internal medicine during the last 100 years, at this, the first meeting after the dawn of a new century in its nascent glory, but I join my predecessor, Dock, who says: "These things have been told and retold in more eloquent tongues."

The past is only useful as it furnishes inspiration for the present, hence, contrary to custom, generally speaking, my brief utterances shall not be reminiscent in character. To come down to the past year, it would indeed be hard to describe fully the fruits of that brief period. Moreover, this would be a work of supererogation, since you have already been made acquainted through the medical press with its most important advances and discoveries. Again, neither the number nor the relative importance of the published medical discoveries and fresh views can be arrived at by a process of induction while we are yet so close to the scene of action. Time is needful to encompass, confirm and properly appreciate the true worth of new scientific truths, as well as to determine precisely their range of practical application.

New truths are the raw material, which must be refined by a process, first of confirmatory investigation, then of practical application, before they become the finished fabric and constitute a part of the sum of, or mark an advance in, scientific knowledge. All this is necessary in order that nothing that is good shall be lost to mankind and nothing that is false shall fail to be rejected. Specific points connected with subjects in the developmental stage are likely to be considered by the essayists at these meetings and to be subsequently discussed by the members. Hence the folly of attempting to estimate or to delineate accurately the real or noteworthy and numerous minor improvements at the close of each year. This, however, can be accomplished with ease and certainty from the point of vantage of the future. On the other hand, I am not protesting against the propriety of allusion to revolutionizing and startling discoveries that are of universal interest and promise much for the future, in scientific addresses.

I am not rash enough to attempt a prophecy for the future of internal medicine—a tempting task—but cheered and encouraged by the unparalleled leaps and bounds of the last two decades, we turn with hope and confidence to the new, with its boundless opportunities and possibilities.

It has been questioned by some whether we may hope to make a "proportionate advance in the future," as compared with the course of events in the recent past, but the marvellous expansion of laboratory research, and the greater precision in methods of clinical observation, leave little room for doubt that the increase in actual knowledge will be at an increased ratio—there will probably be witnessed a new era of scientific achievement. At all events, we may anticipate greater progress in the coming years, unless, perchance, the profession falls short in the matter of training the senses and of cultivating critical judgment. Here may be thrown out a word of caution, lest the predominant tendency of the day to rest confidently upon the results of the refined, scientific methods of investigating disease lead to the unconscious neglect of careful bedside observation. The most fruitful results have been and ever will be attained when personal observation and the more exact laboratory methods are happily combined. The medical horoscope, however, reveals nothing that is calculated to inspire universal uneasiness and I have little patience with pessimistic views as we face a period that doubtless holds in store products and triumphs in original research and in practical experience and observation that we will not have dreamed of.

At present this body enjoys the cordial support and sympathy of the majority of the leading medical men throughout the country. It has met the necessities of the past and it will well meet the requirements of the future. The rapid growth and ever-increasing importance of the Section emphasizes the conspicuous ability of those who conducted its scientific business during the recent past. On searching the records of by-gone days, one may discover counsels of their wisdom for future guidance and action; and yet not to be overlooked is the fact that what was best or even good then may not be so now, so radically do conditions change within brief periods, in consequence of the rapid progress of medical science.

The medical section of the AMERICAN MEDICAL ASSOCIATION can point without ostentation and with becoming modesty to its record; it has accomplished highly credit-

able pieces of scientific work, but its rise and growth can not continue indefinitely unless those most deeply interested in its success and intrusted from time to time with the unenviable responsibility of formulating and executing plans for larger usefulness, give even more laborious and careful attention to the arrangement of subjects, the selection of essayists of wide reputation, the office work and other details in the future than in the past. This is necessary if the utility of the work accomplished by our Section is to be commensurate with, or to keep pace with, the development of our science. It is to be recollected that as it assumes a more and more conspicuous or commanding position among professional organizations, the greater will be the danger from deterioration or disintegration. Indeed, "the safety of any organized body is in inverse ratio to its size" (Rothrock), or, in other words, so soon as it commands attention and stirs the thought of the general public, it invites honest criticism. This is no new idea, but a well-established physical law. Hence, although there are no "vague shapes of gloom" in the horizon, it behooves the conductors of the offices of this organization to keep in remembrance the principles it embodies and to adopt a policy that will at all times reflect, what after the closest scrutiny, observation, experience, investigation and honest conviction is believed to be the highest wisdom and calculated to promote the highest interests of the Section. This policy should, it seems to me, determine also what subjects shall be discussed and whether certain questions are of sufficient importance to be discussed at all. The effect and the object aimed at would be probably to lessen the number of topics considered at each session, but it would give impetus to the merits of the papers presented and would also allow more time for their discussion. Nothing is gained by presenting an overfilled program that can neither be carried out satisfactorily nor enjoyed by the members. The amount, as well as the character, of the material supplied should be prearranged with greater care than is practicable under the present system, so that the proceedings could be grasped within the time allotted to our sessions. Symposia meet the difficulty to a certain extent, particularly if previously arranged and planned in such a manner as to avoid repetition, as well as to present the most interesting aspects only of the subjects brought forward. It is my firm conviction that the growth of the medical section and its influence upon the medical profession of the United States could be greatly enhanced by extending the work of the Executive Committee. Better still, perhaps, would be the appointment of a special committee on scientific business. This committee should hold office for from three to five years, thus insuring a membership conversant with the working arrangements and needs of the Section. The Secretary of the Section should be a member of this committee and the chairman a member ex-officio. All papers intended for presentation at the annual meeting of the Section should be in the hands of and scrutinized by the committee at least one month prior to the date of the meeting.* A part of the function of the special committee previously suggested should be to report plans, and broadly sketch new features with a view to effecting improvements in the work, thus insuring the greater prosperity of the Section for the future and removing certain deficiencies that may tend to limit its utility. I care naught whether the suggestions I have ventured be adopted, but I do affirm that the times are ever ripe for readjustments looking to the improvement and betterment of the character of section work. I desire to invite especial attention to the timeliness of a self-examination, a close scrutiny of the internal condition of things.

I am pleading for a policy that will tend to exalt the professional importance of the Section, which should at all times be specially representative of the best medical research as well as the ripest experience and observation of this fair land; and for a policy that shall insist upon a maximum of creative, constructive, original work to the exclusion of wearisome individual details and cumbersome bibliography. These meetings should be the occasion of the most important contributions to *practical* medicine.

Assuming this position to be incontrovertible, are we thoroughly alive to our responsibilities and opportunities? My apology for raising this query, if any is needed, is that one meets with comments like the following[1]: "The meeting itself appears to have been one of interest. The papers read were not of very striking originality. Perhaps we should except two of them from this remark." When it is recollected that these statements apply to the meeting of the AMERICAN MEDICAL ASSOCIATION in general, and that the total number of papers read before this body annually is several hundred, the words quoted above can not be regarded as a gratifying expression of approbation.

The accomplishment of high praise instead of comments like the above is the goal for this organization. If it be thought from these remarks that my attitude is too pessimistic, I must demur; on the other hand, I affirm that the times and the occasion are alike pregnant with promise and encouragement. Conditions are most favorable when viewed in the light of the situation as it existed in the recent past. My sole desire is to emphasize the importance of carefully watching and guarding the Section in its upward movement. Surely the auspicious opening of a new century should furnish a hopeful prospect and mark another mile-stone in its march toward an era of increased prosperity and greater practical utility.

Specialism in the science and art of medicine is an absolute necessity, but I venture to suggest that certain reforms are desirable in the line of rearrangement of the work that has been embraced under the Section on Practice of Medicine, as well as in those most closely allied to it. I am, and have been, in thorough accord with the establishment of the Section on Pathology. This is a special department of medical science for those who take a really scientific interest in the subject, and those who have had careful training in the methods of investigating the more obscure and finer questions in morbid anatomy and pathology. The technical knowledge that results from these laboratory studies, and the expert opinions based upon them, however, are of no small value in the study and recognition of many diseases. We welcome the fruits of these labors and utilize them, but the majority of the members of the medical section have neither the training nor the time needful to devote to the detailed work of the new Section. On the other hand, the general practitioner must constantly keep before the mind's eye a picture of the gross lesions of disease, and must appreciate the processes involved in their pathogenesis in

* These suggestions are met in part by the new rule compelling the retiring chairman and two members of the Executive Committee to approve all papers presented before the Section before they can be published in THE JOURNAL, but does not prevent the reading of unworthy articles.

1. Editorial in The Lancet, London, vol. II, 1893.

order that the clinical manifestations may be properly appreciated. The lines between the sections on medicine and pathology, however, should never be too closely drawn. There is a narrow border field in which clinical observation, laboratory investigation and post-mortem findings are inseparably associated.

In the case of the Section on Materia Medica, Pharmacy and Therapeutics, we have an instance in which cleavage has been overdone; and it is recognized by many who have been closely identified with that section that, so far as applied therapeutics is concerned, it is of practical interest and importance exclusively to the clinician. The greatest progress in internal medicine has been, during the last century, in the sphere of diagnosis, while the advance in applied therapeutics has been comparatively slight. It is true that we are experiencing a wave of over-activity relative to the number of novel remedies brought to the attention of the medical profession, but trustworthy records or positive statements concerning the majority of these are sadly waning. Indeed, a note of warning against the injudicious employment of novel remedial agencies is timely at present. Their action, or supposed action, upon the human economy does not in many cases rest upon the results of experimental pharmacology, but, as a rule, simply upon the briefly summarized personal experience of a single practitioner, whose promulgated statements serve as the basis of a catching and alluring advertisement for some enterprising firm with, let us charitably hope, the most laudable intentions.

Much to be deplored are the hidden purposes of our professional brethren who vaunt novel agents without even presuming to afford clear and convincing evidence of their therapeutic value. It is, however, to be looked upon as a favorable indication that an awakening on the part of the profession at large to the importance of greater interest and attention to the all-important subject of the restoration of health to the sick, and even to the symptomatic treatment of disease, is taking place. The prime object of our art is to cure disease. What manner of physician is he who fails to exert strenuously the resources of that art? Surely none of us would be willing, after making a precise and careful diagnosis in a given case, to step aside and allow the therapist to conduct the treatment. Nor should we, as clinicians, feel gratified to continue in attendance upon a case in which the treatment was dictated by a specially-trained therapeutist. This granted, obvious harm has arisen and will doubtless continue to arise from injudicious specialism. It is true that the study of the physiologic action of drugs is the basis of scientific therapeutics; it is equally true that the progressive clinician must avail himself of such knowledge—the finished laboratory product—resting as it does on the immutable basis of physical truth. As practitioners, however, we know that while there is a therapeutics founded upon pharmacology, thanks to the genius and labors of Magendie and Bichat, there is also an empiric therapeutics and a yet wider sphere of curative action in hygienic means, including dietetics. Whatever forces are of practical use must be embraced in the armamentarium of the medical practitioner; he must know the proper basis for their application, and the fundamental laws or rules that serve as guides to the attainment of scientific accuracy in his efforts to overcome disease.

Among the important questions pertaining to the treatment of disease that are awaiting a clearer solution and should be considered by this Section may be mentioned; serumtherapy, organotherapy, the higher precision of results from alkaloids as compared with crude drugs, the true sphere of hydrotherapy, of climate, rest, exercise, massage, diet, venesection, and electricity. Would not a more careful, thorough and comprehensive consideration and a fuller informal discussion of these subjects by the Section lead to increased knowledge pertaining to most valuable aids for the relief of suffering and the cure of human ills? Is not the oft demonstrated fact that medicines are the least important part of the treatment of disease too commonly lost sight of by essayists? For example, success in the treatment of disease is often possible only by the use of appropriate dietetic measures. "The father of medicine," Hippocrates, was fully alive to the importance of a wise selection of pabulum for the sick. Knowledge of the fundamental principles of dietetics is essential for the conducting of the cure of disease (Clarke). Too little interest is manifested by the general practitioner in the diet treatment of disease; he is in great need of practical information relating to this theme and of enlightened discussion of the subject. Now, there could be no more opportune time than the present and no more appropriate place than in this section to consider and discuss this subject in its practical phases, and the same remark would apply to the other physical methods of treatment to which I have made passing reference.

The development of proper and efficient systems of treatment must be the achievement of the physician; he must master their "spirit and form," for he alone is acquainted with the complexity of the indications calling for their utilization. I have been surprised that an upheaval of sentiment in favor of a return to first principles, or a throwing of therapeutics where it properly belongs, into the Section on Practice of Medicine, has been so long delayed. I am not protesting against a special section, properly organized for the prosecution of certain definite lines of investigation, more particularly the physiologic action of drugs, their constitution, and materia medica proper—a section of "Pharmacology, Pharmacy and Materia Medica," if you will pardon a suggestion. As in the case of morbid anatomy and pathology, the clinician is interested in the results of such scientific work; the accurate knowledge thus gained by the laboratory experimentalist is of marked value to the successful treatment of disease and satisfactory observation at the bedside.

I am not an advocate of the unlimited multiplication of sections, and I have a fixed belief that the best method of making the AMERICAN MEDICAL ASSOCIATION the aggressive, energetic and world-famed organization that all of its members must wish it to be, is by a co-operation of the more or less closely allied sections in the bringing forward and the discussion of certain subjects or selected aspects of appropriate themes that possess leading interest, in joint sessions.

I am led in consequence of these reflections to make another step in the same direction, and refer briefly to the brilliant dawn of a new morning on which the obscuring mists of ignorance, prejudice and misconception have been lifted by the light of advancing truth, and the gifts of surgery to medicine are appreciated and cordially welcomed. The increasingly large number of human ills in which surgical aid is invoked suggests the thought that a closer affiliation of the surgical and medical workers would be of importance to the welfare of mankind.

Speaking of specialism, says Shattuck,[2] "The heart

2. Address in Medicine, Phila. Med. Jour., Sept. 22, 1900.

is practically the only viscus which remains the exclusive property of the physician, and I am not so sure that even this organ will soon be attacked and we may hear of suturing mitral valves." Of a truth, this organ has been invaded by the surgeon. Neither the physician nor the surgeon can afford to confine himself alone to his specialistic studies; there should be held more frequent meetings on a common platform for the discussion of certain subjects or phases of topics of mutual interest; and consultations in the operating theater and at the bedside, as well as combined medical and surgical clinics in the arena for the benefit and instruction of students are urgently demanded. Truth and fairness compel the admission that the zealous surgeon is sometimes more to be honored, possibly even rewarded, for what he attempts than for what he actually achieves. Without wishing to detract from the merits of our surgical confrères, the medical practitioner is compelled to witness or learns of surgical operations having been performed which would most probably not have been executed had the operator first consulted with a progressive clinician. Conversely, the physician would grow less conservative as the result of more frequent consultations between himself and surgeons—a consummation to be desired. The thyroid gland has been extirpated *in toto* for exophthalmic goiter with resulting myxedema; cholecystotomy has been performed too commonly for supposed cholelithiasis where gall-stones were not in evidence after opening the abdominal cavity. These conditions, and numerous others that could be cited, should be carefully and thoroughly studied by both physician and surgeon, prior to operating, in order to determine precisely the nature of the affection in the case and the indications for treatment, medical and surgical. If this suggestion be not more generally adopted in the future than in the recent past, there remains but a single course open to the medical man, namely, to enter the domain of surgery.

In short, somehow or other, the medical man and the surgeon should be brought into closer, truer and more intimate relations with one another along certain definite lines, in the growing border lands, so to speak, between internal medicine and surgery. This is essential to the attainment of the true dignity, the comprehensive scope and beneficent intent of the medical profession. The morbid processes that we term medical diseases are not entities, and this is equally true of surgical conditions and affections; and success in the matter of their treatment demands, in many case, the combined efforts of the physician and the surgeon. Analogously, while each section of the AMERICAN MEDICAL ASSOCIATION has, for the most part, a distinct function (and while the best work may be done by the special local and national societies), yet the judicious affiliation of those sections having interests in common is indispensable to the realization of the full measure of our strength and our influence as a national organization. No greater stride toward the attainment and maintenance of our true position, toward promoting professional achievement and welfare or strengthening the pillars of the ASSOCIATION could be taken than by a closer, truer union wherever the strands of mutual interest of the different sections are inseparably interwoven.

Finally, if the AMERICAN MEDICAL ASSOCIATION hopes to be one of the great powers of the country, it is of grave importance that the proposed reorganization scheme be promptly effected and that due effort be made to establish and maintain proper respect and forbearance between the various sections, to the end that they may work in perfect harmony with one another.

I have attempted to point out a few lines on which our organizational and professional progress must be conducted. If I have seemed to lay too much emphasis upon the interdependence of certain sections of the ASSOCIATION and insufficient stress upon scientific investigation and data as the one sure means to a desired end, I would say in extenuation that the apparent omission is to be ascribed to the restrictive custom as to the time for a chairman's address. On the contrary, in the special work of this section, or any of the others, contributions based on original obesrvation and research must, in the future as in the past, constitute the choicest fruitage. Looking to the attainment of these higher results, permit me to suggest, in concluding, that an earnest effort should be made to enroll on the escutcheon of our Section all the master spirits in America, all who are bound together by the common tie of special research and observation in the broad field of internal medicine.

Original Articles.

APPENDICITIS.*

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In addressing the medical section at this meeting, I acknowledge to a feeling of great satisfaction, for though my subject is a surgical one, I can come before you without hesitation, since no one has such power to increase the application of surgery as the general practitioner—not by diagnosis alone, but even more by a proper comprehension of these morbid conditions most commonly seen by the surgeon.

I shall make a few remarks on appendicitis, and though to some of you this may seem a topic sufficiently discussed, yet many false ideas still cling to it, and each day convinces me of the necessity of threshing out the matter until the priceless grains of truth remain.

The appendix is probably the most vulnerable of the abdominal organs, and this from several causes: 1. It is a structure in the process of retrograde metamorphosis; it is deficient in blood, nerve and lymphatic supply; it is long and its caliber is small, hence its drainage is easily interfered with; and lastly it is subjected to traumatism by the movements of the psoas muscle, on which it usually lies. From this, then, it is apparent that the appendix may easily become a very target for the destructive micro-organisms—normally present in its lumen—where from any cause these are incited into activity; and it is especially noteworthy that a hollow, glandular organ remains intact only so long as the production and evacuation of its secretion continues normally. When this function is deranged there are serious results: 1, retention, stagnation and decomposition of the appendix contents; 2, pressure, leading to impairment of the appendix wall; 3, and most important, the bacteria, especially the colon bacilli, are so increased in number and virulence that they are able to penetrate the coats of the appendix and set up their irritant processes in varying degrees. Such is, in brief, the pathogenesis of appendicitis—a complex process, essentially progressive in character.

In conformity with clinic observation two varieties

* Read in the Section on Practice of Medicine, at the Fifty-second Annual Meeting of the American Medical Association, held at St. Paul, Minn., June 4-7, 1901.

of inflammation of the appendix are recognized, an acute and a chronic; and while a chronic appendicitis may be the result of a previous acute process, yet it must not be forgotten that appendicitis may also be chronic from its inception. The following classification is suggested as convenient and well founded. Acute appendicitis: 1, catarrhal; 2, interstitial; 3, ulcerative; 4, gangrenous. Chronic appendicitis: 1, catarrhal; 2, interstitial; 3, obliterating.

It must, however, be frankly admitted that we are not always able to distinguish clinically the different pathologic varieties of appendicitis. Indeed, dissimilar lesions may even present identical symptoms; nor do the clinical manifestations bear any suitable proportion to the degree of involvement of the appendix.

These apparent inconsistencies are explained by the fact that most symptoms are due to peritoneal inflammation by extension, and nothing is more striking than the diverse reaction of the peritoneum to the same variety of inflammation as seen in different cases. In addition, the inflammatory phenomena are dependent on the situation and extent of the lesion, the rapidity of its progress and the changes induced by possible previous inflammation. The majority of appendical inflammations are chronic in nature; and many of the so-called acute cases represent exacerbations, a relighting of a quiescent focus, whose unsuspected presence an accurate history, I am sure, would often indicate.

It is not rare to have demonstrated in an individual the whole pathology of appendicitis, as when a chronic catarrhal appendicitis develops interstitial changes, ulcerates, becomes gangrenous and perforated, and is partially liquefied in an abscess; in chronic cases this sequence is common after months and years. But in the acute cases these same destructive effects are the rule, and take place with extraordinary rapidity, only requiring ten to twelve hours for the formation of a considerable pus collection or purulent peritonitis as adhesions determine. As in other diseases, so in this, nature makes an attempt at conservative resistance by adhesions to localize the inflammation and resulting abscess.

But I have never seen much good from these efforts of nature to cure; for the abscess itself, by its tendency to infect the peritoneum, is a grave menace, and even if the abscess ruptures into a hollow viscus, like the intestine or bladder, the situation is not much better. In this connection it seems advisable to refer to a variety of appendical inflammation which, not dangerous in itself, has been the indirect cause of innumerable deaths; I refer to obliterating appendicitis. Complete obliteration of the lumen of the appendix is the familiar standby of many general practitioners, but it is a will-o'-wisp; it does occur, I admit, but so rarely as to be practically non-existent, and in several thousand abdominal operations I have seen it scarcely a dozen times. The relation to treatment is obvious.

This, then, is a short sketch of certain features of the pathology of appendicitis, and two points in it I especially emphasize: 1. The practical non-existence of any form of inflammation which by obliterating its lumen renders the appendix harmless. 2. The appalling rapidity and suddenness with which the appendix may suffer bacterial invasion and necrotic degeneration with resulting general peritonitis. Forget, if you will, all other surgical pathology, but remember those two facts: upon them is based proper treatment and the justice of claiming appendicitis as a purely surgical affection, and whoever doubts their truth, him I invite to be present at my operations until conviction is forced upon him.

I shall not detail the more minute changes; our patients require pathologists for the living rather than pathologists for the dead—if I may use these terms; they need diagnosticians of disease by the bedside infinitely more than recognizers of morbid tissue at the laboratory.

It is the diagnosis, then, which is of supreme importance; and this ordinarily is not difficult. But first let me utter one word of caution: No frequent disease presents its signs and symptoms in such varied form and locality as appendicitis; make it a rule, therefore, in *all* abdominal cases to first exclude appendical irritation, because careful examination will often reveal as due to it affections otherwise apt to be classed as "enterocolitis," "acute dyspepsia," "cholera morbus," "biliousness," etc.

In all inflammations of the appendix, not entirely chronic, there are three "cardinal symptoms," viz., pain, tenderness, and rigidity; and of these pain is, in every variety, by all odds the most significant, so much so that I regard with suspicion every clinical history with a "bellyache," inflammation of the bowel, neuralgia of the stomach, and affections given in similar terms. But the pain of appendicitis has certain characteristics: above all it is paroxysmal, cramp-like and colicky, and may at intervals almost disappear. As to its locality, it is usually first referred to the umbilical and epigastric regions, becoming localized in the right iliac fossa only after the lapse of several hours, and that not in all cases. It is upon this point that egregious errors have been committed, so many of which I have seen that I should like to have emblazoned upon every house-top this sentence: The pain of appendicitis is neither always nor necessarily referred to McBurney's point; and pain elsewhere by no means excludes appendical inflammation. And if you ask me the reason, I have merely to call your attention to the variability in position of the appendix, the different parts of it affected, and the diverse involvement of the sympathetic nerve plexuses, to make my remark appreciated. For instance, pain and tenderness on the left side are commonly noted, and indicate that the appendix points south—rarely east—and occupies the pelvis; in such cases vesical symptoms are common and occasionally the pain is referred along the course of the spermatic cord, and may even cause retraction of the testicle, as in kidney-stone.

If the appendix is behind the cecum and points north pain may be referred to the back, to the kidney or to the liver, and it is then that skilful examination is needed to elicit, by palpation, the tenderness complained of subjectively. Too often have I seen in consultation, practitioners, after a few ill-directed punches, assert the absence of abdominal tenderness, when careful, deep palpation revealed a small, but exquisitely painful spot in the loin, pathognomonic of appendical disease. In fact, many a doctor, despite sufficient experience, never learns the art of palpation, since lightness of touch and knowledge of what to find are wanting, and thus many appendicitis cases are overlooked.

Examine first away from the seat of disease, and slowly and gently approach the tender area. A localized spot of extreme tenderness is probably the surest indication of pus formation; conversely, abrupt cessation of such pain is apt to denote complete gangrenous change and paralysis of the peripheral nerve filaments

by toxin absorption. In addition to tenderness, palpation determines the presence and degree of rigidity. This is usually well marked and most intense over the inflamed appendix, but sometimes the rigidity of the entire abdominal wall is such as to preclude the possibility of local examination. Other symptoms of appendicitis—vomiting, diarrhea, constipation, etc.— I shall not consider, except to say that in appendicitis the temperature record is utterly untrustworthy and gives no reliable data in regard to pus, which, if encapsulated, may develop quite as well with a normal temperature as with an elevated one. Nor do I depend to any extent on blood examinations; a leucocytosis of over 20,000 usually indicates pus, unless either shut off by adhesions or the individual is overwhelmed by septic absorption. In fact, in appendicitis I have never learned by laboratory methods what was not as surely obtainable at the bedside.

I shall merely refer to the differential diagnosis of appendicitis. In men it is concerned especially with affections of the kidney and gall-bladder—calculi for the most part—while in women uterine and ovarian disorders are added. Occasionally the diagnosis is difficult, but in the vast majority of cases an accurate history, careful palpation and a due regard for the three cardinal symptoms—pain, tenderness and rigidity—readily suffice to distinguish appendicitis from other diseases.

It may be well to allude to the similarity between typhoid and appendicitis when both are in the early stages, and despite the Widal test such cases require much consideration. The slow onset, headache, temperature record, and epistaxis point to typhoid; while in appendicitis the local manifestations are usually more marked. As I have said the symptoms of appendicitis are seldom in proportion to the appendix lesions; let it suffice therefore to diagnose early the inflammatory involvement, which is of itself proper enough indication for rational treatment; and if you ask me what this is to be, I answer: There is but one treatment for appendicitis, viz., the aseptic scalpel of the surgeon, and it should be called upon as promptly as the diagnosis is made.

I know that some will recall cases apparently cured without surgical interference, and I recall them too, for in my experience they were on the operating-table with gangrenous appendicitis and abdomens full of pus, the saddest sights in surgical practice; for the first attack of inflammation creates a locus minoris resistentiæ for the later development of bacterial destruction. Clinical experience, unbiased judgment, therapeutics itself teach the absolute inefficiency of drugs to control or even affect a progressively inflaming appendix, and in the face of these facts medical powerlessness becomes by delay medical dawdling; and when, in appendix cases, I encounter pus, developed in an acute exacerbation after an interval of supposed safety, I realize that some one has blundered—either the physician, in not insisting on operation, or the patient in refusing it. In such instances allowing pus to be present is almost a crime, so easily averted is it by an early operation in itself practically without mortality. In fact I regard the medical treatment of appendicitis as high-grade "Christian Science."

As for the intervals after an acute attack, I consider them as absolute indications for operation. How often has a flourishing life been blighted by blind confidence in their permanence; how often are they but the inception of that quiescent repose that ends in the eternal rest of the grave!

The very history of appendicitis shows the necessity and growing appreciation of early surgical interference, and it is this practice which I both have and shall continue to reinforce with all my strength. It is the duty of our profession not to be scientific merely, not to be experimental alone, but to be life-saving, and this is the especial province of early operation in appendicitis.

DISCUSSION.

DR. DELANCEY ROCHESTER, of Buffalo—I want to say a word from the standpoint of the physician. I agree entirely with all that Dr. Deaver has said, so far as I heard. I regret that I did not hear his remarks concerning the morbid anatomy and symptomatology of the disease. I only wish to add one or two words upon the subject of diagnosis and treatment. I want to make a strong plea for the value of the blood count in the diagnosis of these conditions during the acute inflammatory state and, particularly, during pus development. I have in mind several cases in which the blood count was of great value in determining purulent inflammations. I was called in to see one case during the absence of the attending physician. I was informed that the case was not one for operation, that an operation was not indicated on account of the weak condition of the patient. There was abdominal tenderness which was diffused generally through the pelvis, more particularly in the region of the appendix, and very markedly tender at McBurney's point; there was no tenderness above that point. This tenderness had existed for some time. The family was decidedly opposed to operative interference. Finally, a blood count was made and we found 56,000 leucocytes in a cubic millimeter; I then told them that an operation should be performed. In order to be certain several counts were made in succession, and the number of leucocytes never went below 15,000. An interesting point in reference to the blood count was that the leucocytosis varied with the temperature; with an elevation of temperature there was an increase in the leucocytes and *vice versa*. An operation was performed and an appendicitis was found to be present but complicated with disease of the ovaries. I think that, in this case, the blood count was of value in that it made me insist upon an operation. Dr. Deaver has stated that we may mistake disease of the gall-bladder for disease of the appendix; that they may be mistaken for each other. I wish to relate a case, occurring in the practice of Dr. Stockton, which I saw with him on several occasions. A young woman entered the hospital who had great pain and tenderness over the whole of the right side of the abdomen. The diagnosis made was that she was suffering from gall-stones. A blood count was made, a leucocytosis was found to be present, and it was thought that she had a purulent inflammation of the gall-bladder. An operation was performed, the gall-bladder was opened and pus and gall-stones were found. The patient improved for twelve hours and died within twenty-four hours. At the autopsy it was found that gall-stones had perforated the appendix, and that the patient had died from appendicitis in connection with the gall-bladder trouble.

As regards the treatment I believe that the aseptic scalpel is the only one for appendicitis in cases where it can be used.

DR. J. V. KELLY, of Philadelphia—I think that, after the first twenty-four hours, a medical man should not attempt to treat a case of this disease. I have never regretted sending for Dr. Deaver, but have regretted not having sent for him early enough.

DR. FRANK D. SMYTHE, Memphis, Tenn.—I am prepared to agree with Dr. Deaver in toto. My experience in the management of appendicitis bears out the truth of every point he has made. Appendicitis is essentially a surgical disease; and a physician essaying to treat a case of appendicitis without the aid of a surgical colleague should possess considerable diagnostic skill in order that the proper time for operation could be determined. If the diagnosis were made early and the patient subjected to immediate operation you would lose none of your cases of appendicitis. The operation should be performed

before the appendix becomes the site of an abscess and before the peritoneum shall have been invaded. At this time the operation can be performed quickly and safely and without risk of contamination of the peritoneum. The operation is a perfectly safe one in the hands of a skilful surgeon—practically without risk if performed promptly after its early recognition.

I have never lost a case of appendicitis when operated upon during the first day of attack. In this disease all cases should be subjected to immediate operation if recognized at the onset and seen by a competent surgeon. During the past year I have operated upon ten cases of septic lymphangitis and peritonitis following gangrenous appendicitis after perforation with 100 per cent. mortality. In none of these cases did I entertain any hope of recovery. I do not believe that a case of general septic peritonitis can be saved with or without an operation; I have never seen a case of this character reported as cured, and certainly have seen nothing of the kind in my practice.

No man can say how a given case of appendicitis will terminate, regardless of the mildness of the symptoms, if treated medically. It is impossible to predict what twenty-four hours will bring forth.

The mortality of appendicitis depends upon where the appendix points in the event of rupture, and not in the least upon the plan of campaign pursued if managed medically. Dr. Deaver has just said that the medical treatment of appendicitis is nothing more nor less than high-grade "christian science," and that the only legitimate way of treating appendicitis is with the aseptic scalpel in the hands of a conscientious and skilful surgeon. I agree with the essayist in every particular.

DR. J. A. WITHERSPOON, of Nashville, Tenn.—I have listened with pleasure to the remarks made by Dr. Deaver and my confidence in him has never slackened since he was my teacher. I rise to-day to say that if the medical treatment of appendicitis is to be according to the belief of the "christian scientists," then the man who has a little pain in his belly, with a little temperature and with very few physical signs, who submits himself to operation, that man is as brave as Julius Caesar and has the faith of a Daniel. Now, gentlemen, we, as general practitioners, must realize that appendicitis is both a medical and a surgical disease. There are many cases that are mainly surgical. There are many cases of appendicitis that you and I have seen get well from the medical treatment, by placing the patient in bed, at once stopping all nourishment, applying ice-bags over the appendicular region, keeping the patient perfectly quiet, and using rectal enemas; with such treatment I can see no reason why many attacks of appendicitis will not end in recovery. Take the experience of my friend from Memphis who has just addressed you; he has lost 10 cases from operation. How many have lost 10 cases without operation? I believe that the proper course to pursue in these cases is to let the physician and surgeon go hand in hand; let the surgeon be urged to meet the emergency of perforation or of the abscess. These cases should be carried through the acute attack and, if an operation is demanded, let it be done during the interval. Eighty per cent. of the cases of appendicitis get well without the knife. But, if we can have such a skilled man as Dr. Deaver with us, he may save every case if seen in the primary stage, but we are not all of us fortunate enough to be able to call in Dr. Deaver, or as skilful a man, and every scalpel is not aseptic. We all know that in the smaller places if such extreme views prevail and men often incompetent undertake this operation that many lives will be sacrificed on the altar of fanatical surgery.

DR. BOARDMAN REED, of Philadelphia—I agree with Dr. Deaver in the main, but I can not agree that at all times and in all places the aseptic knife is the only remedy in appendicitis. I agree, however, that in large cities, in hospitals with their skilled abdominal surgeons, with trained nurses, and all the paraphernalia and conveniences for clean and good work, that an operation performed on the first day, and perhaps on the second day, would be the most conservative; but, if in the country far from any hospital, from skilled surgeons and trained nurses, etc., I believe that we must then think of other remedies besides the knife. If one can not get a trained surgeon and if the case has gone on to the third day I think it is sometimes safer to treat the case conservatively by rest, poultices and starvation and help perhaps from laxatives, calomel, or opium, than to resort to surgery.

I wish to say a word in regard to the chronic cases of appendicitis. Here the main thing is to prevent. It is a well-known fact that most of these cases do not arise from concretions, or seeds, as was once thought, but from an extension of a catarrhal process involving the colon, chronic, insidious and often unrecognized. I think the symptoms that precede chronic appendicitis are not frequently enough recognized. They nearly always include, vaguely, impaired health, constipation or diarrhea, anemia, a lowering of the strength, general malaise, etc., symptoms which give a warning that something is wrong. The patient then does not need so much a surgeon as he does a skilled clinician, one skilled in palpation, skilled in recognizing the early signs which tend to cause catarrh of the appendix. Besides recognizing the catarrhal condition in the bowels, besides palpation and recognizing the tender spots over the involved portions of the intestine, a more rigid condition of the muscles on the right side of the abdomen can usually be made out and there are also signs to be discovered in the urine which will aid us in making a diagnosis if in doubt, i. e., the presence generally of indican or the aromatic sulphates, or both, together with an increased total acidity of the urine.

DR. I. N. LOVE, of New York City—We all know what the position of Dr. Deaver has been and that it is a definite one; we all know the position he has held for a long time. We also know the position held by Robert T. Morris, and other experts, from a surgical standpoint. If we who are specialists in internal medicine study the question carefully, we must study it from both the standpoint of medicine and surgery. We must study not the theory but the conditions confronting us. Every case is a law unto itself. In every suspected case of appendicitis it is highly important that a competent physician, a good diagnostician, be called in early. We all know that every case of cholera morbus, every case of catarrh of the bowels, every case of ptomain poisoning, or suspected typhoid fever, every case of abdominal disturbance in fact is a possible case of appendicitis in disguise. Speaking of symptoms, whenever I have been called to see a case giving evidences of the disease along these lines I have observed that rigidity of the right side of the abdomen is a fairly positive symptom. Nature is placing a splint upon the disturbed bowel by making rigid the abdominal wall. Tenderness at a given point goes without saying. If the irritation be discovered early enough we usually assist Nature by emptying the canal and placing the patient at once at rest, starving them, placing an ice-bag over the seat of the trouble and then have an ideal surgeon constantly in attendance, ready to meet any emergency that may arise. If no emergency arises then we should continue to treat the patient along the lines indicated, and an operation can be done at our pleasure. In my own judgment operation should be done through fear of recurrences, although a patient may escape such recurrences. If the conditions are ideal, and if Deaver, Morris, Price, or other well-known abdominal surgeons could be had, even if it was at the country crossroads, I think an operation may be done; but in an average case of appendicitis I would trust to quiet, diet, starvation, ice-bags, and time.

DR. WILLIAM BAILEY, of Louisville, Ky.—From the standpoint of the general practitioner, I heartily approve of all contained in the paper read by Dr. Deaver. In doubtful cases I am always ready to have an exploratory incision made for the purpose of clearing up the diagnosis. I have no confidence at all in the medical treatment of this disease. I make this remark in the face of the fact that many cases do recover without operation; so far as I know, they did not recover through any virtue of the treatment employed. I can recall cases of appendicitis that were not operated upon, that have gone for more than forty years without recurrences of the attack; but I have seen so many that did not come on after any catarrhal

condition but as a thunder-bolt in a clear sky and in twenty-four hours were in an inoperable condition. In cases of doubt as to diagnosis I am always ready for the surgeon to make an exploratory incision. I do not believe that such an incision is a factor at all in the cause of death in such cases. I doubt very much the reports made in the papers that the patients died from the surgical operation; they died from disease which surgery was not able to relieve. I do not believe that any case, no matter what the conditions are, can be operated upon too soon, and I doubt if it is ever too late for operation.

DR. C. W. LILLIE, of East St. Louis, Ill.—To illustrate how rapidly an apparently latent case of appendicitis may develop, I wish to relate one in which I have been particularly interested, occurring in my only son. This young man, 21 years of age, robust, hearty, a football player and a general athlete, appeared all right at noon, but one-half an hour later, during my absence, he was taken with severe pain in the abdomen, which at once showed the place of development of a hernial tumor; my attention was called to that when I returned one-half an hour later. I was not aware that the young man ever had a hernia. When my attention was first called to it signs of collapse threatened and I feared that the young man would die from some cause apparently unaccountable to me. I had him taken to the Jefferson hospital in an ambulance. While in the ambulance on the way to the hospital the tumor entirely subsided and the pain disappeared, so that on arrival at the hospital he walked up one flight of stairs to his room, and operation was deferred until the day following. Twenty-four hours after the first advent of pain he was operated upon by Dr. Waldo Briggs, who found that he had to deal with about 5 inches of the ascending colon which was gangrenous, and that 4 or 5 inches more of it was in such a congested condition that at least 8 inches must be resected; fully 5 inches of the ileum was also in a partially necrotic condition and the entire 13 inches of the intestine was removed. The appendix had sloughed off in nearly its entire length. Resection of the bowel was done, the ileum and the colon were joined by the Murphy button and the patient made a good recovery. The points of particular interest in this case were the suddenness with which the alarming symptoms came on and the complication of a hernia which alone was believed to be the real trouble. As a result of this I am of the opinion that we should never allow our cases to go too long without operation. Since the occurrence of this case I have had another which happened in a hearty young man; within a few hours after its development an operation was done and there was found a gangrenous condition which with a few hours more delay would have necessitated an almost similar operation.

DR. H. S. MCCONNEL, of New Brighton, Pa.—It seems to me that we are not recognizing the fact that there are two treatments of appendicitis, the medical and the surgical; when the general practitioner is called to see a case he considers it a medical case, but for him to treat every case of pain in the abdomen as one of appendicitis I think is a great mistake. I think it is his duty to treat every case of pain in the abdomen unless he is positive that he has a case of appendicitis to deal with. One should bear in mind that there is not always a rigidity of the rectus muscle nor pain in the right side, for often they are on the left side of the abdomen. There is no doubt in my mind but that a severe case of appendicitis should be operated upon so soon as diagnosed. I have seen men come here who preached that we should wait twenty-four hours before resorting to operative interference; but I think that if the patients were treated, as they should be, with ice, saline solutions, etc., we will not make many mistakes.

DR. FRANK WARNER, of Columbus, Ohio—I believe that there is but one time to operate in cases of appendicitis, and that is when the diagnosis is made, and the best way to make that diagnosis is by the presence of pain, tenderness and rigidity over the region of the appendix. Whenever these symptoms have arisen I must take issue with Dr. Love when he makes the statement that "then an operation can be done at our pleasure." Again, I do not approve of the method referred to by the gentlemen who preceded me, that we should wait awhile. After the diagnosis is made I think we would make an egregious error if we did not proceed at once to operation for the reason that we do not know what one of these cases will develop a gangrenous appendix. After diagnosing a case, if you wait even over night either your operation is a useless one or else you have added greatly to the danger. It has been stated that we can not all secure the services of the greatest surgeons to operate for us; I think that any man, with a moderate degree of ability, is capable of doing this operation and with less danger to his patient than if he either waited for the presence of a great surgeon who is long in reaching the patient, or resorted to medical treatment. With pain, tenderness and rigidity present, and the diagnosis settled, we should decide at once to operate, and I do not believe in wasting time because every day added to the postponement of the operation adds to its death-rate.

DR. A. F. HOUSE, of Cleveland, Ohio—If there is any general practitioner in the room who will point out to me how to discriminate between the so-called medical cases and those that are surgical, I will be greatly obliged to him. In my experience with these so-called medical cases of mild degree, after a certain time, may come an explosion, as it were, and the case becomes a fulminant one, and the patient died; I have never yet seen a case that terminated fatally from too early an operation, while I have seen many cases that have died because they were operated on too late. I am glad to be able to support the opinions expressed by the essayist.

DR. WM. M. FINDLEY, Altoona, Pa.—I rise simply in the interest of the 20 per cent. You that were present at Atlantic City last year heard an able discussion on appendicitis and you remember that Dr. Senn made the statement that 80 per cent. of the cases recovered without operation. I rise in the interest of the 20 per cent. Personally, I would not like to be one of that 20 per cent. I do not believe that the medical profession need have 20 per cent. of deaths from this disease. The records of gentlemen who are not connected with hospitals and who operate in the homes and hovels in the country give a better record than 20 per cent. of deaths when the operation is performed early, at the time the diagnosis was made. I have recently heard it stated here that operations are performed upon cases of appendicitis thirty-six hours after the diagnosis is made, and this, too, in the cities. I certainly believe that, in the cities where there are hundreds of surgeons, that these cases should be operated upon at once. In the little town where I live the death-rate during this past year was about one per cent. where the cases were operated upon within twenty-four hours; but, after thirty-six hours, I do not think such a good result can be obtained. I sincerely hope that the medical men of the United States will get away from that 20 per cent. death-rate in appendicitis.

DR. GEORGE F. JENKINS, of Keokuk, Iowa—There are cases of appendicitis that should not be operated upon, and I think it is absolutely wrong to operate upon every case so soon as the diagnosis is made. If the treatment is carried out in certain lines—rest, salines, ice-bags, etc.—and if the treatment is commenced early enough you will not be compelled to resort to operation in all cases. Operation is always indicated when suppuration occurs. Dr. Deaver says that no physician can foretell the danger in any case, and hence he would not take the responsibility of treating even a mild case unless permitted to operate immediately. Does he say to the patient: There is no danger in operating, I will certainly cure you? No; he is still unwilling to take the responsibility, but says: If you will take the risk, I will do the cutting. Every case should be treated either medically or surgically, according to indications present. Responsibility rests equally upon the physician, whether he chooses to operate or not to operate.

I claim that we should always treat the man who has pneumonia, not simply treat the pneumonia, and I insist that, for the same reason, we should always treat the individual case of appendicitis, and not simply treat appendicitis. Routinism is as reprehensible in surgery as it is in medicine, and hence I am opposed to cutting in every case of appendicitis.

DR. J. M. SPELMAN, of Anaconda, Montana—I desire to say a few words because I find that the gentlemen who live in the Ohio and Mississippi valleys find it difficult to secure a skilful surgeon. In Montana it is impossible to get Dr. Deaver, or any other noted surgeon out there; it is impossible to do anything but take right hold of these cases yourself and, I promise you, we do it. We find no difficulty in performing operations for appendicitis, but we do find difficulty in treating them on medical lines. It seems to me that the discussion that arises year after year in the American Medical Association does us more harm than good, because it often has been the cause of delay in cases that required immediate operation; the idea has become prevalent among the people that operation should not be performed at once and so they will not allow it sufficiently early. I feel that this operation is as much an emergency operation as tracheotomy or herniotomy as we were formerly impressed and that every good practitioner should know its technique.

DR. W. H. CHRISTIE, of Omaha, Neb.—As a general practitioner, I wish to speak briefly. Gambling, whether done as a private individual or as a professional man, is a bad business so far as the pocket-book is concerned in the former and one's standing in the community in the latter. These patients that died from the operation when it was performed in the latter stages might have lived if they had been operated upon at an opportune moment. Waiting before operating is gambling with human life. We can not tell, nobody can tell, what is going to happen when the appendix becomes diseased. Therefore, I do not believe in gambling with human life; we should urge operation immediately, as soon as the diagnosis has been made.

DR. JOHN B. DEAVER, of Philadelphia (closing the discussion)—So far as the value of the blood count is concerned I do not question it, not for one moment; but, where there are no facilities for such work, and where time is necessary in order to profit by such an examination, causing delay, then I am opposed to it; the patient's welfare will not admit such a delay.

I can not agree with all that has been said relative to the medical treatment of appendicitis. In cases that have recovered from an attack I believe that it is wiser to operate between attacks than to wait till another attack is ushered in; operate in the interval. I do not believe that there is a man living who can tell whether A., B. or C. can recover.

I maintain that it is all right for a surgeon, if properly trained and an anatomist, with experience and common sense, and with the facilities for operating, to operate so soon as the diagnosis of appendicitis has been made. I also maintain that the surgeon is better able to read the conditions inside the belly than a medical man.

I wish to congratulate Dr. Bailey; with his silver locks, he can teach all of you; I admire a man at his time of life who is abreast of the times, and I pray that we may have him with us for many years to promulgate views such as he has to-day, which must accomplish much good.

PRELIMINARY WORK.*

EUGENE S. TALBOT, M.D., D.D.S.

CHICAGO.

Many years ago it occurred to me that physicians could follow generally with advantage both in pathology and physiology the example of neurology and study the human body from the standpoint of both its embryonic and post-uterine evolution and from the standpoint of its degeneracy as well. It was long recognized that health simply constituted a balance and that disease meant the destruction of this balance with resulting undue predominance of some healthy function and the undue depression of others. Practically the same rule is followed by the chemist who controls his analytic experiments by his synthetic, and vice versa. Physicians and dentists generally in studying man as an entity, view the differences between the normal and the abnormal as of kind and not of degree. To avoid this error, I have studied the degenerate phases of man from the standpoints of etiology, physiology, and lastly and most important from the standpoint of embryology and post-uterine development periods. The result of these studies has been the general discussion of degeneracy as a phase of evolution, in "Degeneracy: Its Signs, Causes and Results," published in London in 1898. The local degeneracies either as an expression of general advance or its reverse have been outlined in my works upon "The Etiology of Osseous Deformities of the Head, Face, Jaws and Teeth;" "Irregularities of the Teeth and Interstitial Gingivitis or so-called Pyorrhea Alveolaris;" "Degeneracy of the Alveolar Process." It is now my intention to discuss one of the most important of local degeneracies so far as dentistry is concerned: Degeneracy of the Pulp. Last winter I arranged with Chicago dental surgeons that extracted teeth should be saved for me. My assistant collected from their offices every afternoon at 4 p.m. The teeth were then cracked open at my office, the pulps removed and placed in Müller's fluid and 1 per cent. formalin before 6 p.m. From 1958 teeth obtained, 1017 pulps were removed. Macroscopically the pulps were thus divisible: Normal, exposed, inflamed and suppurating, mummified, calcified and calculous; fungoid, with exostosed roots; loose teeth abrasion; pulps destroyed with arsenic and deciduous teeth pulps. Sound erupting third molars and bicuspids extracted in regulation had been placed in Müller's fluid ere they came under my observation.

In nearly every case the pulp could be lifted out of its chamber so far as the apex of the root. In every case, the root had to be crushed before the pulp could be detached. Pieces of the cementum almost invariably adhered to the pulp, which required considerable force to detach. The slight adherence of pulps to the chamber was due to anatomic construction. This peculiar relation of the pulp to the walls of the canal becomes obvious when attempts are made to remove it in single-rooted teeth, after application of arsenic. The nerve broach not infrequently carries the pulp with it in passage toward the apex. The pulp often comes out in doubled-up contracted mass. Sometimes it comes away in pieces, and sometimes the pulp is not entirely detachable from the end of the root. The claim that pulps immediately removed from the teeth after extraction adhere to the wall of the canal is not borne out by experience. If nerve fibers radiated from the pulp and extended into the dentine it would be impossible to remove the pulp from its chamber. The pulp, however, can not be removed from the end of the root without breaking; it therefore seems evident from a macroscopic standpoint that nerve fibers as such do not enter the dentine. In removing the pulp it always remained *in toto* on account of the strong connective tissue.

A point of great interest in connection with pulp adhesion to the root is that not only the degeneracy of the pulp, but also of the tooth likewise. In development of the tooth, calcification begins at the crown and extends toward the apex. Calcification takes place at the periphery of the root and extends toward the center. A marked opening results with a large primitive organ (the pulp) until the apex is reached, when it closes. This closing often continues after the crown has erupted. The foramen is almost completely closed. What was

* Read in the Section on Stomatology, at the Fifty-second Annual Meeting of the American Medical Association, held at St. Paul, Minn., June 4-7, 1901.

once a large pulp containing nerves and blood vessels tapers down to the minutest size with but only one or two blood vessels and nerves remaining. In the lower mammals teeth have open ends with large pulps. These furnish sufficient nourishment to the teeth and resistance to decay. Of the 1017 pulps collected 131, or 11.9 per cent., were more or less mummified. While no special attempt was made to determine the extent of mummifaction, 75 per cent. of the 131 seemed mummified. The remainder had varying degrees of mummifaction beginning at the apical end. The extent of bloodletting at the time of extraction governed the degree of mummifaction. The question further arises, What amount of blood did the pulp contain at the time of extraction? Did the closure of the apical end of the root cut off the blood supply? It is certain that teeth with mummified pulps were hard, dense and comparatively difficult to crack. In pulps partially mummified there was a demarcation between the part filled with blood and the dried end. In the dried end, mummifaction was complete. The dried specimen was removed from the end of the root with as much difficulty as the normal pulp, while the main part could be readily lifted out of the chamber as there was no adhesion. The pulp can become completely mummified in six to twelve hours. All the teeth from the same mouth were sometimes mummified. The pulps in abraded teeth had receded and been almost obliterated. Recession is sometimes followed by obliteration of the pulp chamber. In most cases, the filling of the pulp chamber does not follow. Blood supply is almost if not quite exhausted. In cases where the roots were exostosed the pulps were often almost obliterated with corresponding filling in of the pulp chamber. In other cases mummifaction of the pulp occurred. There were seventeen (1.5 per cent.) calcified and calcalous pulps. In some the tooth had to be completely crushed to remove the calcified mass which had adapted itself to the walls of the cavity. In others the pulp could be removed in its entirety, so complete was the calcification inside the pulp inself. There were four fungoid pulps of 1017 pulps. In all four, pulp stones could be felt. The percentage of minute pulp stones can be determined by the microscope alone.

In interstitial gingivitis, where the alveolar process has receded and the roots of the teeth have been exposed for some time, the pulp recedes and the canals become filled with dentine. Although the pulps are alive, the substance in the tubuli decomposes and the odor is more penetrating than that from dead pulps. The dentine becomes dark and twice as much force is required to break open the tooth than in the normal variety. These teeth are brittle and fly to pieces, while the normal tooth splits lengthwise.

The tooth is the lowest structure in the body since it is formed of material which can be destroyed by disintegration only. The pulp is a temporary organ, having attained its normal size and hence been at its best when it commences to form the dentine. The apical foramen is largest in the lower vertebrates. Pulp stones or secondary dentine are the commencement of degeneracy. No lymphatics (Sudduth) exist in the pulp, since it is a formative as well as a degenerative organ. One hundred and thirteen, or 11.1 per cent. of the pulps examined, were exposed, infected with pus infection and sloughing. The inflammation sometimes extends throughout the entire pulp. Sometimes one part or side only is affected. In the case of a molar, inflammation often extends upon the side of the pulp and into one root. The other side of the pulp root or roots remains normal or is but slightly affected.

These teeth and pulps were turned over to Drs. Latham and Anderson for cutting, staining and mounting for the microscope.

THE LITERATURE OF THE PULP.*

VIDA A. LATHAM, M.D., D.D.S., F.R.M.S.
CHICAGO.

In reviewing the work done on the dental pulp, it appeals very strongly to the operative side. In other words, the majority of the papers concern themselves with the pathologic conditions, which include special and general pathologic states from inflammatory to degenerative, and bacteriologic gangrene to formation of pulp-stones and the treatment of the same. One noteworthy point is the constant effort directed to the "killing of the pulp" by every known means and the very little encouragement to try to save the "formative organ." In these days of advancement of the histophysiologic research and the introduction of new methods and chemicals, it seems strange the dental pulp appears to have been considered as either completely worked out or not so important an organ as enamel or dentine or even the peridental membrane. Yet its development, structure, functions and variations are hardly understood—and we expect to cure its ailments. It is true a great deal has been investigated and many essays and papers presented from all parts of the world, but very little truly scientific work has been completed. Take the latest works on dentistry and see in what small space the dental pulp is mentioned and the debatable points occurring in almost every line. Even the dentine seems to be of greater importance, and yet the question may be asked: "Should we have a dentinal layer if the pulp were not formed early and were not of primary importance as a formative papilla for its development?"

In this paper, so far as possible, references to the operative treatment of the pulp have been excluded, and in considering the anatomy, histology and especially the development of the pulp, many authors have described the neighboring structures of odontoblasts, dentine and enamel, it being impossible to separate them wholly from the pulp. Anyone wishing to study the latter must be willing to examine also the former.

Dentists are now waking up to the fact that we must have more preliminary training in the elementary branches, and schools of dentistry are constantly improving. It would be a worthy object to found grants, scholarships and opportunities for original research work to post-graduates or advanced workers, instead of such memorials as oil-paintings, busts, etc. The former would carry far more weight, would perpetuate memory in a nobler way, and reach to almost every clime and class by constant quotation, thus enriching science and benefiting thousands of suffering humanity. How many libraries contain works on dentistry accessible to the student that are of recent date or valuable in looking up the subject? It has been said that publishers object to giving the large medical and scientific libraries a copy of a book for fear of lessening its sale. Personally, I think this objection should not be sustained, as many people who note a new book in a library or store, finding it suited to their needs will buy a copy to have at hand. Hardly any one man (even if he could afford it) cares

* Read in the Section on Stomatology, at the Fifty-second Annual Meeting of the American Medical Association, held at St. Paul, Minn., June 4-7, 1901.

to buy every book published in his own branch, since so many are merely reiterated statements, by worthy investigators, not brought up to date or not original. Owing to the scarcity of accessible works even in the majority of our large central cities, the task of "looking up literature" is by no means easy or worthily done, oftentimes many essays and papers scattered through the numerous journals being out of reach. Better libraries are needed.

Perhaps the earliest mention of the dental pulp is by Galen,[1] who states: "He felt the pulsation in a tooth that was aching in the same way as any other inflamed part. I know that the seat of one pain was in the tooth and the other in the gum." "To Galen we may also ascribe the discovery of soft nerves supplied to the teeth."

In 1771 John Hunter noted the building up and closing in of the pulp cavity when attrition has worn the teeth, as did George Prochaska (1780) in his work published in 1800. Besides these, we may note Thomas Bell, Bertin Rousseau, Lent. Raschkow, Richard Owen, Alexander Nasmyth, Kölliker, R. T. Hulme, E. Albrecht, R. Hohl, J. Bruck Junr. F. Ulrich and many others, whose papers chiefly relate to calcifications in the pulp and pathology.

About the earliest histologic point I have found so far seems to be by Paul B. Goddard,[2] who described the pulp as composed of granular matter invested by a delicate membrane or epithelium.

Prof. L. S. Beale, in 1865, states the pulp tissue is not converted into dentine, neither does the dentine, nor tissue from "which it is formed, exhibit any characters justifying in stating it to be connective in origin. Dentine is only produced by the agency of the so-called cells." The mass of the pulp is composed of a single form of connective tissue with numerous oval and triangular corpuscles (germinal matter) not unlike the mucous tissue of the umbilical cord. This will seem to be foreign to the title of this paper, but I find in almost all articles the close relation of dentine and its histology and origin the chief topic.

Kölliker[3] summarized the dental tissues in one of the first text-books, which held its place for many years. The odontoblasts were formally termed "dentinal cells" (Elfenbeinzellen). Kölliker termed this entire layer of cells *membrana eboris*, because after the pulp has been withdrawn it usually cleaves to the inner surface of the tooth in the form of a continuous membrane-like layer. Kölliker, Klein and others, state that odontoblasts excrete dentine, differing from Waldeyer, who has a most complete and satisfactory theory as regards the development of the teeth. He also makes mention of Sharpey's fibers being formed in the cementum, and agrees with Boll that the odontoblasts (a term originating with Waldeyer) send fibers and connect with each other by lateral processes. He also edits the article on "Formation of Dentine,"[4] which formed the basis of a controversy with Prof. H. Hertz in *Virchow's Archiv*, and was used by Franz Boll in order to explain the contradictions of the two investigators and so form an independent opinion.

Franz Boll is an investigator to whom we owe much. His work[5] is standard to-day, even in the light of so much new research by better methods and apparatus. Professor Waldeyer, of the University of Breslau, eminent as a histologist and microscopist, says in his famous essay on the mouth and development of the teeth: "We owe to Mr. Boll (a medical student at Bonn, when his essay was written) the first definite knowledge of the condition of the nerve fibers in the teeth." Boll says we *never* secure the whole pulp or *all* the soft part of it, as the odontoblastic processes project into the tubes of the dentine. Let one be ever so careful in extracting the pulp from freshly cracked teeth, a trace of this peculiar layer will rarely be found on the surface of the pulp. But if cracked and then hardened in chromic-acid solution for an hour, using considerable care in removing broken dentine and a sharp knife, one may sometimes obtain the superficial layer of the pulp *in continuo*. The processes which are enclosed in the dentinal tubes generally break close to the body of the cell, but by a skilful movement of the knife they may sometimes be successfully extracted of considerable length from the tubules.

J. Tomes described nerve fibrils in the dentine continuous with the pulp-network, and considered these fibrils to be the cause of sensitive dentine. Boll, in his demonstrations, used the long incisors of rodents, as guinea-pigs, rabbits, etc., which may make some difference as regards the attachment of the pulp to the dentine.

Goodsir's[6] work was received without question by most anatomists, if not by all, inasmuch as it gave a very definite intelligible description of observations in place of vague general notions, especially as regards the development of enamel, which was, in 1863, clearly demonstrated by Professor Kölliker.

Legros and Magitot in their work[7] give a very excellent résumé of much value. This work, published in 1873, was translated in 1880 by M. S. Dean of Chicago.

J. Raschkow[8] mentioned that the teeth developed under the mucous membrane and enamel organ. He described the blood supply of the pulp, by two or three arteries and asserted that the pulp has one large and a few smaller nerves, the latter breaking up near the surface into an exceedingly fine plexus, called the plexus of Raschkow. Boll and others suggest that fine filaments are given off from this plexus which inosculate with the branches of the odontoblast cells, but as yet this connection has not been demonstrated and accepted as a fact.

Neumann,[9] in 1863, demonstrated the dentinal sheaths. Boll following out the dental nerves in their further course, more recently. Tomes[10] has most carefully and successfully continued the study of the finer points of dental structure and, by first demonstrating the dentinal fibers, opened the way to a correct interpretation of the nature of dentine.

Lent[11] demonstrated the dentinal processes of odontoblasts. Klein[12] says the cells beneath the odontoblasts are spherical and nucleated, and, according to his view the dentinal process is derived from these cells and it from odontoblasts.

Retzius[13] observes by the use of Golgi's stain, that the nerve fibrils of the pulp appear to penetrate between the odontoblasts and terminate between them and the dentine. Rose[14] says, with increasing age the odontoblasts appear to suffer from atrophic changes.

Erwin Hoehl[15] states that three kinds of cells occur in the pulp at different life periods: 1, the outermost peripheral layer of branched cells; 2, centralward the conjugation cell layer, containing the elementary or primary odontoblasts, the largest process of the cell becoming the future dentinal fibril; 3, secondary odontoblasts (dentinoblasts) by conjunction of the first and second layers.

R. R. Andrews[16] states that odontoblasts in forming

the matrix of dentine give out minute globular bodies which form a layer of calcoglobulin, not being themselves any part of the matrix. The fibers within the tubes are formed from a separate cell, deeper in the pulp tissue, whose processes pass in through the protoplasmic mass of the odontoblasts to reach the dentinal tubes of the formed dentine.

BLOOD SUPPLY OF THE PULP.

Bödecker[17] in discussing Mr. Witzel's work, says: "I have not been able to see an artery in a pulp as illustrated, though I will not say there may not be one." So far, he has only met with capillaries. Arteries go into the pulp and divide at once upon entering it. In fetal pulps, a number of arteries are seen extending to the base of the tooth, but on entering are only seen as capillaries.

Dr. W. H. Atkinson[18] says that no embryologists will state there are three coats on the vessels in the pulp; the large vessels are sinuses.

Dr. A. O. Hunt[19] notes Dr. Patrick's demonstration of the methods of blood supply to the follicle of the developing tooth. Specimens were prepared as follows: Injections of gelatin carmin were made through the carotid artery; sections cut from the jaw were put into absolute alcohol and ground down, no water being used, only alcohol to keep them wet. Examination of these specimens showed that the blood supply of the tooth did not pass directly from the artery through the foramen but was distributed through the cancellous bone by a number of small branches and all along the peridental membrane by a system of capillaries. He believed the nerves did not pass directly through the foramen but by a circuitous route accompanying the blood current. All the blood vessels stopped on the outside of the membrane and the supply was there taken up and distributed by a system of capillaries. A fetal (eight months) tooth showed this clearly and he thought it true of the developed specimen. He doubted the old theory that the artery and nerve fibers entered the foramen directly, and he also thought the office of the peridental membrane was simply to sustain what it has built up. In other words, the artery breaks into capillaries, passes into the cancellous bone about the teeth, is distributed to the peridental membrane, from it to the pulp through the apical foramen or a number of foramina in the root.

Black,[20] in discussing the above paper, agreed with Dr. Hunt in the statement that no direct branch from the dentinal artery enters the apical foramen and supplies the pulp as depicted in so many text-books; but that many arteries, branches from the main dentinal arteries, are distributed to the bone of the alveolus and the peridental membrane, forming a network which gives off branches that enter the dental foramen and supply the pulp. "In children you will find half a dozen, and before the root is fully formed you will find hundreds of them entering the pulp from all directions, but as the foramen decreases in size they are shut off until there is but one."

J. Leon Williams[21] describes the blood supply of the pulp as coming from two sources, namely, the pericementum and the medullary canal, and has observed in recently developed teeth small blood vessels passing from the pericementum through the side of the root into the pulp; also he notes an "intricate plexus of very fine blood vessels in the odontoblastic layer of cells."

H. H. Burchard[22] believes (though he has not demonstrated) that the pulp has an extensive collateral circulation, the branches of the inferior dental arteries anastomosing freely with the branches of the external maxillary, facial, coronary, mental, submental, sublingual, gingival, internal maxillary and its branches, other than the inferior dental. Cryer's dissections showed that in the lower jaw the inferior dental artery is the main supply.

In the embryo, as early as three months, a blood supply in the dentinal papilla is evident, vessels showing in the dentinal papilla (the future pulp) before the follicular walls (in part the future pericementum) is outlined. "When the dental tissues proper begin to form, the follicles lie in a gutter of bone, their bases (the future necks of the teeth) separated from the bone by a comparatively thin layer of fibro-vascular tissue in which lie the inferior dental vessels. At this stage, numerous arterial trunks are seen passing into the immature pulp." At seven months, the lateral blood supply (from the periosteum) is more marked than that from the base of the dentinal papilla and quite distinct from the vascular supply to the pulp. Bone forms around all the arterial trunks enclosing them, the vessels being at first enclosed by indifferent tissue, this becoming fibrous and finally ossification taking place.

Hertwig's "Embryology" describes the visceral arches at an early stage in the development of the ovum, and states that differentiation of the tissues of the visceral arches into bone, muscle fascia and glands, changes the anatomical relations of the arteries originally supplying the arches.

Burchard's conclusion is that the pericementum is supplied from arteries which enter the apical space in several branches from the dental arterial trunks and that there is free anastomosis with the vessels of the alveolar walls. The pulp is supplied by several trunks from the dental arteries. In case of obliteration of these trunks collateral circulation is established through the vessels of the pericementum and alveolar walls.

NERVE SUPPLY OF THE PULP.

Retzius investigated the endings of the pulp-nerves in fishes, reptiles, amphibians and mammals. He used the Golgi method and traced the nerve fibers to their terminal fibrillæ, which appeared under the dentine or on the free surface of the pulp, occasionally in the teeth of young mice, running between the odontoblasts and the dentine, but never into the dentinal tubules.

Huber[23] studied the nerve supply of the tooth pulp in dogs, cats, and rabbits, employing the *intra vitam* methylene-blue method of staining. He demonstrated that medullated nerve fibers going to the pulp in large bundles break up into small bundles which anastomose and form a plexus in the fibrous tissue membrane covering the under surface of the pulp. From this plexus smaller bundles of medullated nerves pass perpendicularly into the pulp and can be traced "to all levels of the pulp, some of them to the very tip." Besides these, many medullated fibers leave the bundles and approach the surface of the pulp near the lower surface of the odontoblastic layer, losing their sheaths or breaking up into branches, which are non-medullated with varicosities and nuclei and which branch and interlace with each other, forming a network under the odontoblasts. Terminal fibers given off from this network pass up between the odontoblasts and terminate in fine granules near the free ends of the odontoblasts. Somewhat rarely the fibers may be found crossing over the odontoblasts and ending between the odontoblasts and the dentine. In these findings, Huber coincides with Retzius and he states positively that he found no nerve fiber in the

dentine and no fiber connected directly with the odontoblasts or with any other cell elements of the pulp. "The terminal fibrillæ or fine branches given off from them terminate in free endings between the odontoblasts or between these cells and the dentine and are not in connection with the dentinal fibrils directly or through the odontoblasts."

Morgenstern[24] endeavors to establish principally certain special points: 1, innervation of the blood vessels; 2, relation of the axis-cylinder to various cellular components; 3, the nerve endings; 4, structure of the nerve plexus beneath and within the odontoblastic zone.

1. The innervation is enormous. All the arteries, even the finest arterioles, exhibit an extremely fine and elaborate plexus. In the larger blood vessels, it shows a very regular arrangement of the fibers, one set running parallel with the blood vessels and another at right angles to them. In this way, each nucleus is made to rest, as it were, in a network of nerves. One or more axis cylinders are frequently found with the finest capillaries, not uncommonly embracing these spirals. This was especially easy to prove in the crown pulp of a calf. Morgenstern found similar formations in dentine that had been treated by the corrosive sublimate method (Golgi), and had afterward been colored with hematoxylin. The larger nerve fibers have Ranvier cells at fairly regular intervals; the finer ones have few cells or none at all, although they have many knobby enlargements, which appear in the finest fibers only as points.

2. Nerve endings in the pulp are difficult to determine as one can never assert with absolute assurance that where a nerve fiber appears to terminate, it does not really continue in some other direction out of your field of observations. I believe they terminate as free fibers, especially when they divide like a brush into a number of very fine threads. Many axis cylinders end in small knobby enlargements beyond which for the most part a very fine, short thread extends.

3. Between and below the odontoblasts the nerves frequently terminate in rounded cellular bodies, which could be better shown by another method, by means of which they are brought into sharper contrast with their surroundings. These bodies are identical with the terminal discs described above, we assume. Whether the nerves extend throughout the entire odontoblastic zone—a most important question—could be answered positively by Bethe's modification of the methylene-blue process. In the so-called horns of the pulp, more correctly the crest, the nerve fibrils are universally present between the elementary cells which are but imperfectly united to form odontoblasts. These nerve fibrils lie in close parallel lines and send out a large number of lateral branches, between the elementary cells which are side by side in rows. The fibers show by their marked blue tint and by the fact that they spring from the primary nerve fibers, that they are integral constituents of the nervous system which extends throughout the pulp. Dentine germs from human and animal fetal jaws treated by the anilin-blue methods of Ciaglinsky and others (Stroebe) showed the fibrils of Weil's zone to be colored blue, like axis cylinders, but that the dentinogenous substance was likewise colored blue. Where odontoblasts had been formed there was often seen narrow transverse strips of blue tint,[25] by which the odontoblasts seemed to be derived into segments.

Erwin Hoehl also saw this appearance but correctly explained them as fibrils of the intercellular network of nervous elements and this can be proved by the methylene-blue method, and Nikiforoff, also Morgenstern's formic acid was peculiarly efficacious. That cells which belong to the nervous system do occur between the odontoblasts is proved by preparations made with methods two (2) and six (6). The peculiar chemic and optic properties of the odontoblastic zone serve to explain why the morphologic constituents are so difficult to recognize both there and in the membrana præformativa. The nearer the odontoblastic zone approaches the dental process the more thoroughly does it seem to be filled with a hyaline substance which opposes an almost insurmountable obstacle to all investigations.

Whether ganglion cells occur in the pulp is perhaps answered by the methylene-blue test to the extent that remarkably large cells connected with at least two nerve fibers occur, especially near the larger blood vessels, that is, in the axial portion of the pulp.

SUMMARY.

1. The nerves of the pulp are divided into central and parietal nerves according to their location. The nerve branches of the parietal system are more slender, but much more numerous than those of the central. They are spread in two directions, axial and radial, the former following the long axis of the tooth, the latter that of the dentine canals.

2. Although belonging to the parietal system, its outermost stratum forms a system in itself.

3. More strongly developed nerve fibers of the central system form no proper plexus in the pulp; those of the parietal system form temporarily in the young pulps a plexus.

4. Medullary sheaths of the pulp are secondary formations only determined positively in teeth that have been cut.

5. Odontoblastic zone is transversed in the most varied directions by nerve fibers.

6. Nerve fibers terminate in several ways: *a*, free in the pulp; *b*, knobby enlargements with projecting supplementary fiber; *c*, disc bodies frequently seen in the odontoblastic zone.

7. In the central part of the pulp are some very large cells which may be considered as ganglion cells.

8. Different varieties of endings occur even in the enamel.

These remarkable results of Morgenstern's have been questioned by Röse, who thinks it a precipitate in the dentinal tubules and on the processes of the odontoblasts.

Dr. W. G. Aitchison Robertson[26] says "the odontoblasts in the teeth of oxen are bipolar, one process being a dentinal fiber and the other continuous with the nerves of the pulp. He thus regards the odontoblasts and dentinal fibers as becoming in course of development the terminal organs of the nerves of the tooth. These facts and the development of the dentine were made on the teeth of rabbits and kittens, in the former taking advantage of the aid given by feeding the animal for a time on food containing madder, which stains the dentine matrix produced while the madder is being taken just as it does the matrix of bone. The elongation of the dentine results from proliferation of connective tissue cells in a formative ring at the base of the tooth follicle. The thickening of the dentine results from new layers of matrix added from within under the influence of odontoblasts, not from interstitial growth which produces nothing more than a slight increase in matrix between the dentinal tubules in the crown of the tooth." To the question whether the nerve passes as a main fiber from the trunk nerve direct through the

foramen, or are the nerves in the pulp continuous with the nerves in the pericementum, statements have been made that if the nerves extended through the foramina the broken nerve would be seen extending beyond the end of the root, which is never the case! If anyone will take the pains to examine the teeth as soon as extracted examples can often be seen with a projecting pulp or nerve (?) varying from one-sixteenth to one-eighth of an inch in length, some times even more. They appear as whitish threads coming from the apex, especially in cuspids, incisors and bicuspids, blanched on account of the sudden rupture and hemorrhage. Unless noted at the time, the shrinkage is so great it might not be perceived, though carefully fixed material will show the pulp in some cases, specimens of which I have now.

J. L. Williams emphasizes the vasomotor nerves of the pulp and pericementum, showing branches (nonmedullated) distributed to the blood vessels, he suggests that stimulation or injury of these nerves may paralyze the vasoconstrictor fibrils a short time before paralysis of the vasodilator fibrils occurs, thus explaining the engorgement of the vessels which strangulates the pulp in arsenical destruction of the latter. The origin of the vasomotor nerves, he states, is "in the upper jaw from the anterior palantine nerve, which, arising from the spheno-palantine ganglion, is connected with the sympathetic system through that branch of the Vidian nerve which arises from the carotid plexus; and in the inferior maxilla, their connection with the sympathetic system is through a nerve branch from the facial artery, which enters the submaxillar ganglion, through the chorda tympani and also the otic ganglion from a branch arising from the plexus of the middle meningeal artery."

Burchard believes that the nerve supply of the pulp is from the branches of the dental trunks proper, though admitting that nerves pass over the alveolar rim into the pericementum. In mature teeth, he is not certain as to the point of entry. But in a figure showing a cuspid tooth at 13 years, the nerves one-third of the way up the canal are seen to consist of several bundles of medullated fibers which follow the course of the main blood vessels, splitting into fibrillæ, beneath the layer of odontoblasts with which they have a doubtful relationship.

Black states that nerve bundles distributed to the apical pericementum, as well as to the pulp, have a common origin, namely, the inferior dental nerve in the lower jaw and that in the upper jaw, blood vessels and nerves together penetrate the antral wall "into channels of the basal portion of the alveolar bone."

In conclusion, let us note the great diversity of opinions prevailing among histologists. Are not these questions of vital importance before we can in any way reliably attempt or even venture to cure the pathologic conditions brought to our notice? How much more important is the histology, embryology, bacteriology and pathology of the dental tissues compared to the subject of physics by lectures and laboratory as is now being put in the fourth year of some of our dental colleges when it really belongs to the elementary chemic course. Let us encourage workers to give some time, optional or obligatory, during the senior or post-graduate year and give them better facilities by money grants through the Association whose committee on special research could determine whether the candidate was worthy of support or not and let the papers be published in THE JOURNAL if worthy of recognition.

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METHODS IN THE PREPARATION OF TEETH.*

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In preparing sections of teeth for the microscope it is necessary to proceed in different ways according to the structures desired to be demonstrated. For convenience the methods may be divided into: 1, ground or hard methods; 2, injection methods, and 3, structural methods; the structural being subdivided into general or those used to demonstrate cellular structures, and special or those demonstrating nervous tissues.

The hard or ground method should be used for studying tooth tissues in situ. The different processes, though differing somewhat in technique, all consist in grinding down sections of teeth thin enough to examine under the microscope and then polishing to a smooth surface and mounting in Canada balsam.

HARD METHODS.

Nealey's.—Fresh tissues only should be used and the

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method is a rapid one, the sections being ready to mount in thirty minutes. First one side of the tooth and then the other is ground on a dental lathe with a set of emery wheels. The advantages of this method are that the sections do not curl or become brittle.

White's.—Sections of teeth are ground between two plates of ground glass with water and pumice powder and finished with ground glass alone. They are mounted in Canada balsam without heat; or, they may be soaked in ether twenty-four hours, transferred to thin collodion and stained with fuchsin two or three days, when they are hardened in methyl alcohol and ground down at leisure with ground glass and water only.

Dunkerley's.—Sections are cut off by means of a thin copper disc fitted to a dental lathe and revolving in a trough containing water and fine corundum powder. They are ground on copper discs and a Water-of-Ayr stone.

Cowardine's.—From green teeth preserved in turpentine rough sections are made, and then embedded in balsam and ground with corundum of four grades successively. They are then polished with the finest powder, stone lap, dry whiting powder and the hand; and then mounted in balsam, or dry.

Koch's.—Objects are soaked in copal solution, dried, hardened and cemented to a slide, on which they are ground down on a grindstone and on a hone to the requisite thinness and polished and mounted in balsam.

Weil's.—Tooth is extracted and immediately put into alcohol or aqueous solution of bichlorid of mercury to prevent shrinking. In all manipulations—cutting, sawing, grinding, sectioning—care should be taken that the tooth is at no moment without excess of moisture. Pulp is exposed at both ends and fixed in a saturated solution of bichlorid of mercury eight to twelve hours, washed in water two hours, then harden in dilute alcohol and gradually increase the strength 30 per cent. eight to twelve hours; 50 per cent. eight to twelve hours; 70 per cent. eight to twelve hours; 90 per cent. to which tincture of iodin 1.5 to 2 per cent. has been added. Stain in borax-carmin. Wash, dehydrate, clear, embed in balsam and rub down.

McQuillen attaches sections to a slide with balsam and grinds with a hone.

Latimer grinds on a corundum wheel, an Arkansas wheel, then polishes by rubbing on a smooth and dry plate glass.

Boedecker's.—A fresh tooth, or one soaked for a short time in chromic acid, is sliced thin under water and ground as thin as possible upon the corundum wheel of a lathe, always being kept under water. The sections are then placed in chromic acid one-half of 1 per cent. or picric acid saturated aqueous solution to harden tissues and dissolve the lime salts. They are then stained and mounted.

Hart.—After grinding sections thin, immerse them in 6 per cent. glacial acetic acid and then treat them in the usual way.

Modifications of these methods have been advised, as those of Smith, Röse, and others.

INJECTION METHODS.

To demonstrate the blood supply injection methods are necessary. The blood-vessels are filled with colored substances for the purpose of showing their relations to, and course through the tissues. Beale's Prussian blue is the solution usually used. This mass runs well and has not much tendency to exude from cut vessels. Its formula is as follows:

℞.	Price's glycerin	ʒii
	Tincture sesquichlorid of iron	gtt. x
	Potassium ferrocyanid	gr. iii
	Hydrochloric acid (strong)	gtt. iii
	Distilled water	ʒi

Fearnley introduces Carter's carmin into the aorta of an animal, during which time it is kept warm. After the injection it is removed to cold water:

℞.	Carmin	m. cxx
	Glacial acetic acid	m. lxxxvi
	Gelatin solution (1.6)	ʒii
	Distilled water	ʒiss

Whitman, in injecting, uses the femoral, or, if that is too small, the carotid or aorta. The animal is immersed in warm water and normal salt solution forced through the vessels to wash out the blood and dilate the vessels, and then the starch injection mass is forced through.

Inj. Mass:			
℞.	Dry starch	1	
	Chloral hyd. 2.5 aq. sol.	1	
	Alcohol		25
	Color		25
Color:			
	Dry color (ultramarine)	1	
	Glycerin	1	
	Alcohol, 95 per cent.	1	

Lepkowsky injects Berlin blue and then hardens the tissues *in situ* in formol 50 per cent. for two days. Then he decalcifies in nitric acid 10 per cent. (eight to fourteen days) and mounts in celloidin.

Huber used Ehrlich's methylene-blue *intra vitam* method. After forcing through a normal salt solution, methylene-blue in normal salt solution was injected through the carotid until the lips assumed a deep-blue color. Thirty minutes later the lower jaw was removed and cleansed with a dry cloth. The teeth were removed and the pulp placed on a slide in normal salt solution. In a few moments the characteristic blue color was found to have developed in the axis cylinders of the peripheral nerves. In fresh preparations the axis cylinders stained deep blue; the other tissues not at all or faintly. Unfortunately, preparations prepared thus always fade unless a fixative is used promptly. As a fixative a saturated aqueous solution of ammonium picrate (Dogiel), or a solution of ammonium molybdate (Bethe) may be used. The former preparations are mounted in a mixture of glycerole and the ammonium picrate solution; the latter dehydrated and mounted in balsam. Prepared in this way the tissues become so clear that a small pulp may be examined *in toto.* These methods Huber used in a rabbit; they can not be employed in pulps of human teeth.

With these two methods, the hard and the injection, I have had but little experience, having worked mainly with pulps and decalcification of teeth. To demonstrate tissue structures it is necessary to stain microtome sections with different dyes to bring out the different tissues. Either pulps themselves are used, or decalcification of the hard structures is necessary.

DECALCIFICATION METHODS.

Hopewell Smith decalcifies in 5 per cent. chromic acid, or, after hardening in Müller's fluid three to four weeks, removes to alcohol ten to twenty days, washes, seals the apical foramen with collodion and places in 12 c.c. hydrochloric acid 10 per cent. for fifteen hours, then adds 1.5 c.c. nitric acid and in forty hours 1.5 c.c. nitric acid again. In seventy-five to eighty hours they are washed in lithium carbonate for half an hour and cut by freezing method, celloidin, or paraffin. If the

freezing method is used they should be dehydrated in 30, 70, 90 per cent. and absolute alcohols successively for one minute each to prevent shrinking.

Lepkowski's.—Pieces 0.5 m.m. thick are placed in pure formic acid 3 parts, and 1 per cent. aq. sol. gold chlorid 6 parts, for twenty-four hours. Then they are washed in distilled water and placed in gum arabic and glycerin for twenty-four hours, washed, and embedded in celloidin or paraffin.

Kleinenberg's formula:	
Picric acid	100
Sulphuric acid, strong	2
Filter and add dist. water	300
Ebner's formula:	
Hydrochloric acid	1
Sodium chlorid	10
Dist. water, ad	100
Haugh's formula:	
Phloroglucin	1
Nitric acid	10
Dist. water	50

After this solution, tissues stain well and all elements except blood are well preserved.

Schaeffer used a saturated aqueous solution of picric acid containing 2 per cent. hydrochloric acid and a crystal of picric acid added from time to time. When soft the tissues were placed in alcohol containing lithium carbonate. The alcohol should be changed till no color comes away. Embed in paraffin.

Squire's.—Hydrochloric acid 5 grams. and glycerin 95 grams. It softens slowly and does not interfere with structure.

Huber hardens with Müller's fluid for several weeks and then transfers to equal parts of nitric acid 10 per cent. and hydrochloric acid 1 per cent.

Boedecker advised chromic acid .5 to 1 per cent., used in large quantity and renewed frequently. To enforce the action of the fluid he added a small quantity of dilute hydrochloric acid (1 to 2 gtt.). This is a good method for softening the teeth when still in the jaw. It can be stained with carmin, logwood, or gold chlorid. If gold is used, wash well in distilled water to free from alcohol before placing in gold solution (0.5 per cent.), stain one-half to one hour, thoroughly wash in distilled water and expose to daylight several days.

Lactic acid acts well upon teeth (if diluted sufficiently) by dissolving the lime salts much faster than the chromic acid. Specimens decalcified in lactic acid are not distinct enough for study with high powers, hence after being softened with lactic they must be placed in chromic for several weeks.

Boll advises chromic acid one-thirty-second per cent. and gradually increased in strength until in two weeks it contains 2 per cent. or over. Decalcify five to six weeks.

Hopewell Smith.—For jaws of embryo mammals, strip jaws of all tissue except the gums, wash in normal salt solution and place in Müller's fluid for two weeks. Change often, and remove to alcohol and cut by freezing microtome, celloidin or paraffin. Its advantages are its simplicity, the odontoblasts are a large size, and the formation of the dentinal fibrils are at their highest stage of development. It affects but little the relative positions of dentine, odontoblasts, and pulp.

In using the tooth pulps alone great care must be exercised in obtaining them that the pulp may be obtained in its entirety. While some workers claim that all that is necessary is to crack open the tooth and lift the loose pulp out, my experience leads me to think differently. Many pulps that I have worked with have had small pieces of dentine attached along the sides. These were unnoticed at first until the knife struck them in microtoming.

In some sections the tomes could be seen extending out from the odontoblasts along the free border of the section; in others these were present only in places, and many were perfectly free from them. Some investigators believe that the nerve fibrils pass up between the odontoblasts and enter the dental canaliculi side by side with the dentinal fibers. Others differ; but whether so or not one thing is certain, that there is an intimate connection between the tomes and the dentine and that, being so delicate, great care is necessary in handling them. Boll claims that the odontoblasts, by their long processes, which extend into the dentinal canaliculi, are held firmly to the inner surface of the dentine, appearing to the naked eye as a thin mucus-like film. If this film is scraped off with a knife and brought under the microscope we see besides peripheral cells some parts of the inner pulp tissue. He therefore advises splitting a tooth and placing pulp and tooth in a very weak solution, chromic acid one thirty-second per cent. for one hour. Remove the loose fragments of tooth with a thin sharp knife; go between pulp and dentine close to the walls of the pulp cavity. In specimens obtained, thus large quantities of non-medullated nerve fibers are seen toward the periphery of the pulp which, when removed in the ordinary way, adhere to the pulp chamber.

Robertson holds that when a tooth is broken open the odontoblasts cling to the dentine and the pulp remains free, thus proving that the attachment to dentine is stronger.

For ordinary staining, logwood, logwood and eosin, and Van Giesen are good stains; but for special staining, and especially for the nervous tissues which we are so anxious to bring out, special stains are necessary. Of these the following are largely used: Golgi's stain for demonstrating nerves; Ehrlich's methylene-blue shows axis cylinders of peripheral nerves; Apathy's double stain for differentiating nervous and connective tissues; Mummery's iron and tannin for fine nerve fibers; Marchi's medullated nerve fibers, and Underwood's gold chlorid.

For the odontoblasts place in 6 per cent. solution of potassium anhydrochromate for twenty-four hours and tease in picro-carmin. To demonstrate the nerves in the processes of the odontoblasts, Beale crushes a fresh tooth and stains by his method. He macerates in strong syrup until soft and examines a few very thin sections, when the acid will be found to render all tissues transparent except the nerves which are granular.

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SYMPOSIUM ON DEGENERACY OF THE PULP—PAPERS OF DRS. TALBOT, LATHAM AND ANDERSON.

DR. R. R. ANDREWS, Cambridge, Mass.—Concerning the matter of preparing tissue, I have tried all these various complicated methods and with more or less success, but I finally came to the conclusion that if I got my tissue as nearly alive as possible, and used the simplest possible means of preparing it, I got in every case the better results. I have worked mostly on the heads of calves because it seemed to me they showed the tissue so well. I have taken the calf at birth and taken out the teeth and transferred them to a low percentage of chromic acid solution, 0.5 per cent., and if necessary I would use some stronger acids, hydrochloric, for instance, a very small percentage; I cannot tell just exactly the combination which I used. I placed that tissue in the solution and tested it from day to day. I have let it remain three or four weeks, but as soon as I found the area of that tooth sufficiently softened to use the microtome, I would let it remain until my microtome reached hard tissue, and in that way I found the most beautiful photographs could be made from the higher powers. Many pictures of low powers are entirely useless with the higher powers. The tissues seem to have run together and there is no definite picture and no differentiation of the pictures. They have to be very carefully prepared and it takes a long time. I have always been in favor of working as near life as possible, soon after the preparation was taken from the live body and in the simplest possible way.

DR. G. V. I. BROWN, Milwaukee, Wis.—I would have liked to see the symposium develop along the line of pathologic changes that occur in the pulp, so that under the microscope some definite etiological idea could be arrived at. I have had a great many interesting cases the past year, but in a large measure the benefit of them has been lost, because in our laboratories in Milwaukee we do not seem to have any distinguishing way of arriving definitely at the pathologic changes that take place in the pulp tissue. I have in mind one case in which there was a spasmodic affection of the muscles of the face accompanied by a recurrent pain which occurred at intervals of one and one-half to two minutes, so severe that the life of the patient was almost unendurable and the hyperesthesia at the posterior portion of the mouth and pharynx made it almost impossible to take nourishment. The difficulty was finally located in the tooth pulp and cured, and although that pulp was carefully preserved and an attempt made to treat it so it would show the characteristics of that condition we were unable to arrive at anything which we felt we could give out as scientifically correct.

DR. R. R. ANDREWS—If Dr. Talbot, in the large number of teeth he examined, had made a pathologic study of them, it might have been of great benefit in this direction, and he would have found that the pulp even at full maturity of the tooth is of great service. It is a mistake to suppose that the pulp has lost its function when it is fully formed. I know it is the belief that when teeth are fully formed the pulp might as well be out and they let it go, but those who have studied this subject will tell you that a healthy dental pulp has a function to perform through life.

DR. EUGENE S. TALBOT, Chicago—I scarcely think the Chairman and Dr. Brown have quite grasped the situation in regard to these papers. The general subject of this symposium is "Preliminary Work." The teeth were selected by myself and taken at all stages by men who make a specialty of the extraction of teeth. Age was not hence taken into consideration in a general way. The object of the paper was to give my own results only. Dr. Latham, Dr. Anderson and myself have undertaken a large amount of work, which is all preliminary. We have undertaken it in a systematic manner, taking up the general conditions of the teeth in a healthy state and from embryologic and nosologic points of view. There is one point in dental literature to which attention was paid, giving credit to whom credit is due. One object of these papers is to summarize the literature. One-half of it was given. The idea is to compile all literature upon the pulp before generalizing. That has been my method throughout life. All my writings show that I feel obliged to give credit to those that have done work before. After that, I take up the line of work and in all points where the work corresponds with that previously done, I give credit. If it differs, I show wherein difference occurs. That is the only way in which to make scientific research.

DR. VIDA A. LATHAM, Rogers Park, Ill.—I would like to say that I am in the center of a large city, but I have had extreme difficulty in getting hold of material. Our library boasts of a medical department, but it is almost devoid of dental literature except a few current journals. I believe the Northwestern Dental School has a library, but it is rather difficult to gain access, and then, when used for their students, the papers are either in Swedish or Hungarian and I am ignorant of those languages. I have tried to be pretty careful in regard to finding the original, and I have found papers that were under men's names that were a little familiar, that when carefully searched they were not their work at all. So I have tried to be particular on this point. It is rather difficult to follow the literature. I have used the excellent *Cosmos* index; also Dr. Taft's index, which is very good, and in that way I hope I have not missed any good articles in the journals, but I would be glad to hear of any other good papers that have been published.

There is another point in pulp methods that Dr. Anderson has brought out. I have tried to use simple methods. I believe the only successful methods that are being used are those which take in the jaw itself. It is almost useless to take out the tooth because you break the pulp and the continuity is broken. It is difficult to get a jaw or teeth from the human unless you are attached to a hospital. There is a prejudice in America against the postmortem; it is almost impossible to get teeth *in situ*. A point that strikes me very forcibly is why should we use the term "degenerate" in the embryo? Take the new works on embryology, take the American Dental works; take any standard works, and you find almost nothing on normal, let alone, degenerate pulp; the name does not occur. When we think of the importance of it, when the literature is silent on it, how can we treat sensitive dentine? Why should we take out the pulp? How can we treat the pulp when we do not know what it is? It is impossible. Out of ten pulps, nine are probably pathologic. Those who do dental histologic work use the ordinary methods for tissues. These methods must be studied especially with relation to dental tissues. Dr. Andrews is also very fond of glycerol, but after a few years the specimens may disappear! Specimens that I mounted ten years ago, I can find no trace of, and under those conditions, I feel a little doubtful about using glycerol. A man may write asking if you have certain slides to prove your statements, and therefore you must keep the specimens. I once wrote to Dr. Suddeth for specimens and he replied that he did not keep his slides as they were so easy to make! Personally, I do not agree with him. I have put in six months on one slide and then had difficulty to secure a good specimen. This, I beg to say, is mostly preliminary work, and now we expect to go further with various animals and human material from the embryo and find out where the pulp comes from, and when it originates. Some say it forms the odontoblasts, and some say it does not. If sensitive dentine exists there must probably be sensory nerves; if a formative organ they may be secretory cells like enamel or ameloblasts, and I believe nervous also, because we now are finding nerve endings in the epithelium in the tongue, cornea and all parts of the body due to the newer and special methods now being introduced, which previously have not been seen.

DR. G. V. I. BROWN—I am glad to hear what Dr. Latham has said and glad to hear the statement about the preparation of specimens. So far as I have tried the work it has been unsatisfactory. A large proportion of the methods are comparatively useless in application. It is one thing to get a nice, healthy specimen, and another thing to get a reasonable effect in demonstration, and then you should have a perfect specimen.

DR. R. R. ANDREWS—In regard to Morgenthau's demonstration, I think he uses the Galbia method. He found the dentinal tubules which appear to be fibers of nerve structures. I worked

on that method for more than six months trying to get some results, with entirely negative results and I used the most careful methods. It shows how difficult it is to get at these things.

PERIODS OF STRESS AND THEIR DENTAL MARKS.*

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CHICAGO.

Despite embryologic teachings, that old notion that man is an entity who undergoes development alone, still controls pathology and physiology. The human being, however, is a compound animal in whom organs have their own nervous system and their own life under control of the cerebrospinal system. The child is not an undeveloped man, but man is an imperfectly developed child. The embryo has to contend with retrogressive as well as progressive factors, and the same is true of man after birth. Vertebrate embryos are of common type at their origin and assume successively many common forms before definitely differentiating. The higher vertebrates contain in essence the organs and possibilities of all lower vertebrates. The human organism is therefore a balance. While the balance is maintained the organs work in unity, though there is a constant struggle for existence between them. During embryonic existence this struggle is more intense and diversified than after maturity, because of the influence of three contending forces: remote atavism or throw-back to primitive types, immediate atavism or throw-back to less remote ancestors of the same type, and finally immediate heredity. Remote atavism tends to preserve structures which occur in the normal embryo only to disappear. The human heart passes through all vertebrate heart phases. This is likewise true of the teeth. During the life of the embryo the tooth system wavers at one time between the polyphyodont and the diphyodont. At this period, should the diphyodont tendency of man be arrested, the polyphyodont takes its place and the human being sheds teeth as do reptiles. On the other hand, should immediate atavism gain the ascendancy over remote atavism shown in polyphyodontia, diphyodontia occurs. When the struggle for existence between the two is keenest a period of stress results, which affects the organism as a whole. This stress expresses itself most strongly in dental and maxillary irregularities, since the jaws and teeth are among the most variable structures in evolution. Under what is known as the law of economy of growth is governed the relation of the organs to each other, and the process whereby one structure is sacrificed for the development of another or for the development of the organism as a whole. Since certain parts in the evolution of organs disappear and in the evolution of organisms certain organs through suppressive economy and since the disappearing and developing tendency of necessity centers around the time when certain functions are to be lost by the disappearing and others gained by the developing, periods of stress occur around which the law of economy of growth centers the struggle for existence between parts of organs and between organs themselves. It is because of this that physiologic atrophies and hypertrophies and their reverse occur. Nearly all conditions of physiologic disturbance may result at these periods of stress under the influence of maternal environment or of hereditary factors. The fetus, therefore, must be prepared to pass through not only intra-uterine periods of stress, whose dental mark has already been indicated, but post-uterine periods as well.

The child has not attained its full development at the time of birth. It has within it certain potentialities, some of which are never fully realized. There is a constant struggle between the central nervous system and certain bodily functions for preservation of the individual and for preservation of the race, through which the central nervous system fails to reach the height indicated in the child. This struggle for existence after birth is keenest at certain periods. Each period is marked by dental phenomena. The first is the period of the first dentition. Here, coincident with teething, the child is gaining its impressions of the outside world, is learning to walk and talk, and is also developing its eliminative organs, especially the rectum. These varied functions constitute a strain on the system, effects of which are most often evinced through the teeth and jaws. The conditions charged to teething are an expression of constitutional strain finding its outlet through the point of least resistance. During this first dentition, the strain of development forces attention to the teeth, and thereby leads to neglect of other factors. The teeth at this period should be regarded as a meter of constitutional strain, and not a cause of it. Within the next period, between 2 and 6, occurs the first great check to continued development of the brain. Man has learned to use his brain despite this check, but had it not occurred he would have had a higher type of brain to use. Sometimes during this period the brain gains in size, albeit not in balance, at the expense of the general system. In no small degree the struggle for existence during this period of stress centers around the development and eruption of the 6th year molar. With the eruption of this molar, premature puberty, sexual precocity, epilepsy, insanity, gout, rheumatism, obesity, and other nutritive degeneracies, may occur. All have been charged to the eruption of the 6th year molar, whereas its irregular or difficult eruption is, like them, an expression of constitutional stress. Hygiene of the teeth at this period means also constitutional, mental and moral hygiene. Epilepsy, for example, is not a disease, but a symptom of weakness of certain vasomotor inhibitions. The first convulsion does not constitute epilepsy. Through a law of the nervous system, nerve action once roused tends to repeat itself. In this way are established normal and abnormal habits, of which last epilepsy is one. In its early stages a habit normal or abnormal is easily checked. The first convulsion, therefore, could be prevented were its premonitions known. A recurrence could also be prevented were the constitutional origin recognized. Observation of the general constitution at this time, because of irregular eruption of the 6th year molar, would enable the physician to nip epilepsy, and many other allied conditions, in the bud. Reflex notions, however, must be flung overboard. All irritations should be removed and any constitutional irregularity treated.

The obese child of 6 years, even though the obesity be not excessive, should be looked upon from a health standpoint with suspicion. There is liability to disease, and marked tendency to systemic weakness when under morbid influence. These children are particularly liable to rheumatism, gout, etc., and profuse hemorrhage from slight causes. Youthful obesity is sometimes associated

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with precocious maturity and resultant early senescence. More often it co-exists with extended infantilism, as in the case of Dickens' "fat boy."

E. S. Talbot, examining 267 corpulent school children and adolescents, found marked stigmata of degeneracy. Ninety-two per cent. had deformed ears to a marked degree. Sixty-six per cent. had arrested development, as compared with their age, while 12 per cent. presented excessive development. Thirty-four were too young to determine the form and size of the jaw. In 33.5 per cent. of the thirty-four the molars, incisors, cuspids and bicuspids were present. Ninety-six per cent. of these had small teeth. Eighty-seven per cent. (of the 233) had arrested development of the upper jaw; 22 per cent. arrest of lower jaw. Sixty-four per cent. had V-shaped or saddle-shaped arches, or their modification, and protruding teeth. Seventeen per cent. had hypertrophy of the alveolar process. Eighty-three per cent. had small teeth. Twenty-seven per cent. had extra tubercles upon the molars. Eighty-two per cent. had stenosis of the nasal cavity more or less marked. Thirty-six per cent. had deflection of the nasal septum to the left and 29 per cent. to the right. Twenty-one per cent. wore glasses for eye defect. In 58 per cent. there was enlargement of the thyroid gland, and in 7 per cent. arrest of development of it. In 296 cases of early lipomatosis (180 male and 116 females) coming under my own observation, there were 10 cryptorchids, 6 hypospadiacs and 3 cases of pseudo-hermaphroditism. Three females had infantile bifid uteri. Four had enlarged clitorides; in one of these the urethra perforated the clitoris, as in the female shrew. Of 40 girls who had reached 18, only 3 had menstruated normally. The others were amenorrheic or dysmenorrheic, or had neurotic storms during the period. There were 160 hebephreniacs among the number. Of these 120 had masturbated excessively. Ten had been nymphomaniac or satyriasic, the sexual appetite having become completely extinct at 18. Fifty of the non-hebephreniacs never showed any signs of sexual appetite. Three of the hebephreniacs were sexual inverts, while 80 practiced various perversities. Of the non-hebephreniacs 10 were cyclothymiacs, 30 had acute forms of insanity, 10 were epileptic and 15 hysteric. Thirteen had had chorea. Ninety-seven had difficulty in learning to speak and 30 always stuttered.

The appearance of the first permanent molar is therefore of great significance to stomatologist and sociologist alike. The mental and moral deficiencies usually present will interfere with proper care of the teeth particularly indicated in cases where such deficiencies occur. While the eye has received much attention as a sociologic guide the teeth and jaws have, as a rule, been much neglected, although of even more significance than the functional disorders of the eye.

The next important period of stress is practically that of the second dentition. Here there is a foreshadowing of the mental and nervous phenomena of the following period of stress. Sexual development now frequently receives its initiative. What is true of neuropathic children earlier is true at this time of ordinary children, under conditions of stress. There is irregularity of disturbed sleep, irritability, apprehension, strange ideas, great sensitiveness to external impressions, high temperature, delirium, convulsions from slight causes, disagreeably anxious dreams, romancing, intense feeling, periodic headache, muscular twitching, capricious appetite and marked intolerance of stimulants and narcotics. The struggle for existence between the developing alimentary and other systems between the 2d and 6th year had produced effects which are most felt during the 6th to 12th year. Provided this struggle is between normal limits, the average child does not incur permanent danger from it. If, however, from heredity, congenital defect or improper environment, development of the system does not proceed equably, then strain results, which produces, during this period, not only the conditions already described, but the following as well:

NEUROSES.	PSYCHIC TYPES.
Convulsions.	Hallucinations
Nervous laughs	Anomalies of character
Nervous coughs	Aberrant sentiments
Hiccoughs	Love
Renal	Jealousy
Hepatic	Anger
Gastric	Obsessions or imperative con-
Vesical	cepts
Genital	Pure
Pulmonary	Attended by impulsive acts
Adenopathic	Arson
Cardiac	Suicide
Metabolic	Homicide
Stuttering	Alcoholism
"Tics"	Theft
Neuralgias	Rape
Neurasthenia	Non-criminal acts
Ecstasy	Night terrors
Hysteria	Idiocy
Chorea	Imbecility
Epilepsy	Mania
Somnambulism	Acute confusional insanity
	Melancholia
	Transitory frenzy
	Stuporous insanity
	Stupor
	Katatonia
	Paranoia
	Cyclothymia

These are apt to occur at this time as a reaction to temporary disturbances of health. The temperature at which psychic disturbances begins in a child is a fair index of its brain stability. Neuropathic children, on a very slight rise in temperature or even without it, are subject to attacks of unreasonable elevation, during which they are quite beside themselves, rushing about wildly, shouting, fighting, and without clear consciousness of their surroundings. With this last picture stomatologists are very familiar in children brought to them for care of the teeth. During this period such disturbances have to be taken into account in cases where maxillary and dental treatment and regulation are indicated.

The period of puberty should include the period from the appearance of the menses or spermatozoa until the completion of the 25th year. The appearance of the wisdom tooth at this time marks human maturity, which was the reason that 25 was selected for the age of maturity by the code of Napoleon. During this period it is possible to correct dental and maxillary irregularities with benefit to the subject. Every one of the conditions enumerated are due to strain during the period between 6 and 12 may appear. In addition there occurs a type of mental disorder called hebephrenia, or insanity of puberty, which is practically incurable after its development. This is an insanity peculiarly charged to cigarette-smoking, masturbation, overstudy, religious excitement, and "love," all of which are the expressions of the defects and not their cause. These subjects in

the earlier stage of their psychosis peculiarly require teeth regulation. In some cases, strain from the tooth irregularity may have sufficed to upset the unstable mental balance. The next great periods of stress in human life are those of the climacteric and of the senile period. The first is accompanied by the menopause in women and prostate change in men. The dental conditions marking these two periods of stress are generally involutional in character and require prothesis or treatment, not correction.

DISCUSSION.

DR. EUGENE S. TALBOT, Chicago—I have been interested in this subject for years and I have spent a great many years in the study of these conditions. I have never heard a paper so clearly define those conditions as the one that has just been read. Someone has said that the discussion of dental subjects has been exhausted, but a knowledge of the conditions of the mouth so far as hereditary environment and embryology are concerned is still in its infancy. There are some points which deserve attention. Dentists often remark that if their patients were more careful with their teeth they would not decay, and then prescribe a course of treatment handed down for decades. The same old story is told of brushing the teeth, recommending the use of certain preparations, etc. As Dr. Kiernan said, evolution of the teeth is tending towards extinction. Decay of the teeth is a natural process and all the treatment on earth —as now applied—will not save them except in the individual. It is not only a personal calamity, but it has become a national one. Study of the teeth and jaws of the peoples of Europe shows teeth of men deteriorating, where the peoples are not of a nervous tendency, as they are in other countries. Through Greece, Turkey, Russia, Norway, Sweden, France and England, in the order mentioned, is evident degeneracy of the jaws and teeth. There are no peoples in the world whose teeth are decaying to-day like those of the English people. There are no irregularities of the teeth like those of the English. In England it has become a national calamity and the authorities have appointed committees and have furnished money to investigate the cause of decay of the teeth. All attention, the best methods of treatment will not save them.

Another question of the jaws and teeth that Dr. Kiernan has discussed, is the evolution of the second set of teeth. Dentists think they are able to treat pyorrhea alveolaris or gingivitis, and some claim to cure every case. With them it is simply a matter of local application, a peculiar sense of touch with instruments to remove all visible deposits. The condition is an atavistic one, and the disease is preventive to a certain extent. Still, should the individual live long enough, he would lose his teeth. This is a process of osteomalacia and nothing more than atavistic. As Dr. Kiernan has said, change of the teeth is going on continually. Where one tooth is shed in the lower vertebrates after it has done its duty, another takes its place. Where the temporary teeth are shed by absorption the second set takes its place. This absorption goes on with the second set and the teeth are lost in time. This occurs not in all cases, however, but in the majority, if the person lives long enough. Dr. Kiernan showed you a picture of the degeneracy and arrest of development. This is a picture where the child has grown to manhood, yet remained arrested in development. If the internal structures of the body were examined arrest of development would be evident. All have seen such cases, since they are very common. This particular condition illustrated, has arrest of development of the jaws and face. Dr. Kiernan remarks that structures that are temporary are changing from generation to generation.

For this reason dentists should be careful in regulating teeth, especially in children of from one to twelve years of age. These children are in the condition shown. In this neurotic condition the nervous system is very easily involved and also other organs of the body. Children are often invalided for years by having their teeth regulated and dentists should be very careful on that point. Another point about regulating teeth in such patients needs attention. Dentists can not tell just exactly how it comes about, but where the teeth are moved by springs, ligatures and all kinds of appliances, they can not be held perfectly firm. Later in life absorption of the alveolar process occurs at this very point, due to osteomalacia or alveolar absorption. Later in life gingivitis sets in from regulation of the teeth, the jaws are never restored to health and the absorption goes on until the teeth become loose and are lost.

I want to call your attention to the picture, a four and one-half months old embryo. All have seen children that have the appearance of age, with little hairs upon the face and ears, with wrinkles in the face, the hair frequently gray in spots, the skin drawn up and the fingers long and slender. In such patients, dentists should be very careful in the regulation of the teeth and in all operations. They always have irregularities and the greatest care is necessary because of the unbalanced nervous system.

DR. VIDA A. LATHAM, Rogers Park, Ill.—It is a good thing to have the tension made clear on pathologic principles. Many teachers have made the statement that it is absurd to suppose that the changes are made through the nerve functions. They can occur through tension, perhaps not permanently, but it is one of the factors underlying this development, or it may be through a case of retrogression. When we think of the enormous amount of force that goes on in the development of the teeth coming through four dental cycles, and of the congestion which involves the vasomotor and vasoconstrictor systems, we may come to the conclusion that it is due to the period of first stress. I have heard men advance the argument that pathologic stress is absurd; that it can not come from such a source, and was only a poor excuse for ignorance of some local condition.

DR. G. V. I. BROWN, Milwaukee—I can not say very much on this subject without encroaching on the paper that I expect to read later on. I shall be obliged to disagree with Dr. Talbot concerning the regulation of teeth, because I have to begin to regulate the teeth of these young patients before they are entirely destroyed, and from all of which I have demonstrated I can not agree with him. In regard to what he says of the disastrous results following the regulation of teeth in children and young persons, I think it was rather the fault of the method than the age of the patient, and I am convinced that where that continual absorption went on it was due to the effect of occlusion of the jaws on account of malposition, which caused an irritation of the tissue around the mouth.

DR. JAMES G. KIERNAN, Chicago—I only wish to correct a little terminology which I think might be desirable in this Section. There is perhaps no word so misused and misleading as "degeneracy." The question is whether there is general degeneracy or whether it is a disappearance of certain parts for the benefit of the organism as a whole. It is true, a great many changes occur in this way for the benefit of the organism as a whole. The teeth are decreasing in number. There is very good reason to believe that man at one time possessed at least two extra incisors. There is also very good reason for believing that the wisdom tooth is tending to disappear. There is also good reason to believe that the human tooth is becoming microdont rather than macrodont, rather smaller than larger. This is along the general line of evolution with reference to the face and jaws. The human jaw itself with all its beauty, the human face, with all its beauty, is degenerate. For biting purposes and chewing purposes, it is not as valuable as the jowl of the lower races. It is an embryonic feature. It has lost space for the benefit of the brain. The brain has been absorbing more and more space at the expense of the bones of the face. Therefore, in dealing with this question of irregularities it would be wise to look at it in certain cases as a normal process. In certain cases it is wise to study the teeth not only from the point of regulation, but also from the standpoint of removal a little more than is done. No human hand can turn back the clock of time, retain a high type of man, and yet restore the jaw of a prehistoric ancestor who lived on food in which there was an enormous waste. The native or prehistoric races had beautiful teeth; but those teeth could not exist with the environment of the civilized races.

civilized man does not waste his food so much; he does not need to do so much chewing and tearing. In the only animal that can be compared with man, the dog, similar changes are taking place, and these changes of domesticity are coincident with the changes occurring in civilized man. Another factor also influences these changes. There are many race types with different jaws and different teeth. No races are pure considered from this standpoint, but all races are intermixed. It is safe to say that every one of the English-speaking races has some primitive race element in them. Every one of the Teutonic races and every one of the Eur-African races have the same elements in them, and also the Eur-Asiatic. These races have different types of jaws, different sizes of teeth: from their mixture comes the so-called Aryan race. These people are subjected to a new environment. It is therefore a duty to study how far in one case removal of the teeth in a certain type might be a benefit in correcting irregularity, and how far in the other it might be injurious, and deal with the question from that standpoint. It can not be dealt with in a general way, but the individual conditions to which man is exposed must be studied. There is much nonsense talked about the degeneracy of the teeth. This is usually ascribed to luxury. The degeneracy is often an expression of the advance of the human race. When man gets fewer teeth, then there would not be so much irregularity, nor so much trouble in other directions.

INFECTIOUS DISEASES.*

ALICE M. STEEVES, D.D.S.

CHICAGO, ILL.

A knowledge of the possibility of transferring infectious diseases from one patient to another by means of instruments or otherwise, and of the character of the infection itself, is of the greatest practical value. While the necessity for proper precautions to avoid these accidents has long been recognized, the recent advances in the bacteriology of the mouth and throat cause the subject to assume new importance.

Of all diseases in which the infection is frequently carried from the mouth of one patient to that of another, perhaps the most important is syphilis. In this affection two different lesions are formed in or about the mouth, each characteristic of the disease, and appearing at different periods in its course. The primary sore is frequently to be found upon the lips or within the mouth. This is especially true in children. The mucous patches of the secondary stage are usually seen in the mouth, where their seat is on the inner surface of the lip, the tongue, the palate, or the fauces. In size they are from an eighth to half an inch in diameter, and while they extend superficially they are never deep. They are whitish in color, with rounded edges and raised rather than depressed. These two lesions are the sources of most of the infection, which causes new cases of the disease, the virus being carried by actual contact, surgical instruments, household utensils or other accidental means; and to unaccustomed observers they may be overlooked or neglected, or considered harmless because their true character is not recognized.

The frequency with which these conditions occur and the great danger attached to them should warn every oral surgeon to be ready to recognize them and to take proper precautions to protect himself and others.

Modern research into the bacteriology of the mouth and throat has suggested new possibilities in the matter of carrying infection from patient to patient.

The discovery that the germs of scarlet fever and diphtheria may be found in perfectly healthy mouths and throats, and the fact that these germs remain in the mouth and throat for long periods after the clinical signs of the disease have disappeared, suggests the probability that these diseases may be transferred from patient to patient by unclean instruments. Well proven instances of this kind are indeed rare; yet this mode of infection is worthy of attention.

The germs of diphtheria are sometimes found in tooth cavities or in a healthy throat, and although they may not cause the disease in that individual because of his natural resistance, when carried to the mucous membrane of a susceptible person they may produce the disease in a virulent form. The bacillus of diphtheria may be the cause of all grades of sore throat, from a simple acute catarrh to an intense membranous inflammation extending into the nose and mouth; so that the true nature of a sore throat may not be recognized and the bacilli spread from patient to patient on septic instruments as is so often done by infected spoons and forks.

Diphtheria bacilli usually remain in the throat two weeks after the membrane has disappeared, but have been found five or six weeks afterwards in some cases. The infectious nature of purulent discharges following scarlet fever, such as a rhinitis or pharyngitis, are now fully recognized, so that, if after one of these infectious diseases catarrhal inflammations are present, the necessary precautions can be taken to prevent new cases of the disease.

In the same manner, erysipelas, which begins so often at the juncture of the skin and mucous membrane, and pus cocci from suppurating processes in the mouth may be transferred from patient to patient; and it is easily conceivable that the bacillus of tuberculosis could be taken from the mouth of a tuberculous patient on dental instruments and be deposited in the mouth of another patient and then find its way into the lungs.

DISCUSSION.

DR. VIDA A. LATHAM, Rogers Park, Ill.—This is a subject that is scarcely touched upon by dentists, but in connection with the physician we can accomplish a great deal in this direction. Many cities have a quarantine law, and in that way we can control these diseases in large cities, but it is more difficult where a physician is allowed to use his discretion in placarding a house. There is a great latitude in that method. If a physician is not perfectly honest and upright, he can probably be persuaded by higher fees or some other way to favor the family. A man will tell him that he has got to go to business, and the result is the physician does not quarantine the father of the family, and he goes to the bank or to his business without hindrance.

I have had two horrible cases of infection in little folks through the non-disinfection of instruments, more especially forceps. In one case that was referred to a specialist, a syphilitic lesion was caused in the upper jaw through the use of unclean instruments. In another case a woman contracted primary syphilis and as I did not care to be in a malpractice suit, it was referred to a specialist. The cause was using infected forceps in extracting her teeth.

In dental schools how many students are trained to see cases of syphilis in the oral cavities? They do not see them because they are not pointed out. I have only seen them, because I have practiced medicine and dentistry. Few dental schools make any effort to classify or make a clinic for such diseases. Unquestionably, students ought to study and know these conditions. Most of us, if we should see a case, would not recognize it. Therefore, I hope the teaching of surgical cleanliness will be broader and deeper in all its branches.

DR. GEORGE T. CARPENTER, Chicago—The ordinary practitioner will not recognize the conditions, particularly syphilitic lesions, and it is a very difficult matter, even where he suspects

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* Read in the Section on Stomatology, at the Fifty-second Annual Meeting of the American Medical Association, held at St. Paul, Minn., June 4-7, 1901.

a case, to get a history of the case. Syphilis is a disease that is covered up, and sometimes the only thing the practitioner can do is to pursue syphilitic treatment in a case he suspects and the case will respond if his surmise is correct. We can not be too particular in regard to the absolute importance of sterilizing instruments. Less than a year ago I had a relative in my office who was having a little work done. He spoke of a slight abrasion at the corner of the mouth. I cleansed it and gave it some trivial local treatment and the incident passed from my notice. At the same time, I held the chair of oral surgery in one of our schools. A short time after that a brother, who was a medical student at that time, and who has since graduated, asked me if I had noticed William's mouth. I told him I had not specially noticed it. He said he wished I would notice it, as he himself was a little alarmed. He had been taking one of the preparations of mercury, and he believed he had secondary syphilis. If a person teaching these things will let them pass from under notice, what will the ordinary practitioner do? Consequently, I think we should be alive to the existence of these conditions, but above all we should pay strict attention to the sterilization of our instruments.

DR. A. E. BALDWIN, Chicago—The statement is made that cleanliness is next to Godliness, but I believe that cleanliness is Godliness, especially in the dental chair. I think we sometimes exaggerate the importance of the health departments of our large cities in regard to the transmission of many of these diseases. I think it is a question as to whether some of these diseases that are called infectious or contagious are really what the name implies. Where we find those conditions present in healthy mouths, for instance, tubercle bacilli, we find them often present in many mouths of perfectly healthy people. In many school-children we find those bacterial conditions are present in a perfectly healthy mouth. I suppose the only conclusion arrived at is that we must have a proper condition of the system so that the resistance is not great enough to throw off the effect of the systemic poison.

In regard to the use of cleanliness, it seems hardly necessary to speak of it, but I recognize the condition Dr. Carpenter speaks of, the busy practitioner omits to investigate some cases that he would investigate if his mind were not centered upon something else and his time limited. It requires a good deal of courage to acknowledge our shortcomings, but I think if the truth were told by all of us, some things fully as bad or even worse might be said than what the Doctor has told us. But the only thing to do is to fix the fact in our memory, that we must be very careful in everything that tends to the welfare of our patients, and that we must attend to the absolute cleanliness of our instruments, our hands, and our persons.

DR. JAMES G. KIERNAN, Chicago—There is a rather serious error in Dr. Baldwin's statement. In the first place, for infection, two things are necessary; a culture medium for developing the particular germ, as well as the germ. There is probably no healthy individual without pathogenic germs in his mouth. While he is immune under given conditions, those bacteria may be transmitted to another non-immune individual and the result continued indefinitely. The particular medium may be immune, but he continues the danger. That danger, however, has been met somewhat by the prevailing practice in dentistry of using antiseptic washes. There may be certain bacteria in individual mouths and those bacteria may not gain entrance into the system until after operation. This is the case with the streptococcus, the staphylococcus and other pathogenic bacteria. The existence of bacteria in a healthy mouth contains an element of danger greater than is generally recognized.

DR. VIDA A. LATHAM—I would like to emphasize a point brought out by Dr. Kiernan. I think we doctors and specialists should pay particular attention to the throats of children at school. How many children are allowed out under two weeks with an infectious or contagious disease? In England it is at least six weeks or until all the scabs and rashes have disappeared. Here, from climacteric conditions, measles, scarlatina, etc., would be rather light, but there the mortality is greater. In the case of scarlet fever it may be only a light attack, and the child may be back in school in two weeks! I know of a child who had a light attack of scarlet fever, whose mother allowed it to play with other children, putting kid gloves on the hands of the child. Of course, there is danger of infection. I have a friend, a lady, who went to a house where there was a case of scarlet fever unknowingly until the mother told her that her little girl had the disease and also diphtheria. There was no placard, though under a physician. My friend went home, changed her clothing, then hurried to a dentist's office, where she had an appointment. That is where contagion comes from. I do not think children should be allowed out of quarantine to mingle with people as early as they are in Chicago.

DR. G. V. I. BROWN, Milwaukee—I remember last year a gentleman gave us a very scholarly dissertation upon this subject, and it set me to thinking a good deal. Since then I have tried to do a little missionary work, and during the last year I have given, at various times, before school boards and school committees and any who were interested in the subject, an illustrated discussion on this topic, in which I tried to enforce the value of care in this direction by having slides thrown from the lantern upon the wall, illustrating these different germs that we have been speaking about, particularly the diphtheria bacillus, the pneumococcus, and so on. I do not think I can do better at this time than to emphasize again the necessity of doing something more than talking these things over among ourselves. We all know the danger of infection. We are benefited by having the idea that cleanliness is next to Godliness impressed upon our minds, but if we would resolve ourselves into a committee of the whole, and go out from here and spread the information until we make school boards and those who have charge of the instruction and care of young people recognize the importance of these things, we would be doing a great deal more than we are doing here now. I have tried to make it strong in speaking of diphtheria by calling attention to the fact that Park View had an epidemic of diphtheria, and at least 1 per cent. of the children had these germs in the mouth. In Milwaukee we have had members of the medical profession, during an epidemic, examine the mouths and throats of children every morning before school began, but it seems to me that is a good deal like locking the barn door after the horse is stolen, because by the time the lesion is manifest, or the disease recognized, the child has already exposed more children than it would be possible for us to compute. The same is true, in a large measure, of tuberculosis. If one in every seven dies of tuberculosis, as has been stated by Dr. Senn, and many agree with him on that point, and the disease is so prevalent that it defies all our laws of sanitation, it seems to me the practical thing to do is to begin right in the mouth. In by far the majority of those cases of affections of the lungs, the bacilli are in the mouths of such people continually, and whatever care may be taken of the sputum of such people after it leaves the mouth, a little care taken before it leaves the mouth would be much better. It is a simple matter for public schools to have a large vessel at the door with some cheap antiseptic, and make it obligatory upon pupils to rinse their mouths before entering the school-room. I am certain we would do more to check diphtheria and influenza by checking these things than we can in any other way. I think it is well worth continually repeating until we are tired of it, or until we finally make the right impression upon the minds of the people in charge of our public institutions. We are not politicians, but if we can arouse the laity without politics by continually reiterating these facts before the people, we shall feel that our labors have not been in vain.

DR. A. E. BALDWIN, Chicago—I think a great deal of harm comes from posting notices. I know they would agree with me in many large cities. Here is a case of a child that has scarlet fever. That child was isolated from the household, and no one allowed to see it except the trained nurse; no one else ever went near it. Would it be right to isolate that whole building by putting a placard on the front door? They would not be incautious; they could not be affected at all by being in another part of the house. Does that little card, eight by

fourteen, offer any protection? Not at all. It does nothing of the kind. I agree with Dr. Latham that there should be a rigid enforcement of separation between those affected and those who are not affected, children as well as adults.

Speaking of what Dr. Brown has said, I do not think tuberculosis is dangerous to us as long as it is in Dr. Brown's mouth. It is not spread in that way. The only circulation it has is in the air or in food and drink, and the remedy he suggests would do no good in lung difficulties. If we could have any preparation to take into the mouth to destroy tubercle bacilli it would have no effect one-half hour later. I think there is such a thing as carrying this matter too far. Notwithstanding the isolation of these cases, we will find these Krebs-Loeffler bacilli in many mouths that are healthy, and we can not look into every mouth. That is impossible. When we admit that they may be found in the mouths of people who are perfectly healthy, we can readily see that isolation cuts no figure. I do not want anybody to misunderstand me; I do not want to throw open the door to every diphtheric case, but there are a great many things that we advocate that are really not as far-reaching as we think they are. They are not as effective as we think they are. I do not think that anyone who knows me can say that I have ever been an advocate of any chance or careless method in any way, shape or manner, but I do think we had better be a little cautious and know what we claim before we make any great claims for our belief. It is far from proven that many diseases that are called contagious or infectious are really so.

DR. G. V. I. BROWN—In the isolation hospital in Milwaukee, during an epidemic of scarlet fever, the patients were immediately placed upon a system of treatment which included the disinfection of the mouth with hydrogen dioxid and oxygen. The result was that out of one hundred cases there was not a single one affected by any of the various sequelæ that follow that disease. The suppurative process which very frequently is likely to follow that disease, and that almost invariably affects the middle ear, was entirely absent, and there is no question about the value and efficacy of that treatment, and it is now becoming an established factor in the treatment of other diseases. The same is largely true of typhoid fever and some modifications of that disease.

DR. ALICE STEEVES, closing the discussion—This paper has been the outcome of my own observation and experience. I have reason to believe that there has been infection from improperly cleansed instruments in several cases of which I had the care, and I thought it would be well to bring this matter up. In speaking of sterilization and cleanliness, I feel that especially in the schools ordinary cleanliness is not properly demonstrated to the students. We must have ordinary cleanliness before we can have surgical cleanliness.

THE TREATMENT OF CUTANEOUS CANCER.*

M. L. HEIDINGSFELD, M.D.

CINCINNATI, OHIO.

The treatment of cutaneous cancer has been one of the most serious and difficult problems with which the profession has had to deal. The remedies, which at one time have been highly extolled, at another, severely condemned, are exceedingly varied in nature and innumerable in number. Two remedies which are received with much favor to-day, zinc chlorid and white arsenic, have been extensively used, the one for scores of years, the other for centuries. The use of these two remedies, in the hands of certain specialists, was attended, at least in selected cases, by eminently successful results; in others there was absolute failure, if not death of the patient.

Caustics were much in vogue in the treatment of cancer, until the recent advances in surgery were made possible by the introduction of antisepsis and anesthesia. Since then the knife has been freely employed, and its use was gladly welcomed, with the hope that free and radical extirpation would assure a positive and permanent cure for a condition whose erstwhile therapy was exceedingly painful and of more or less doubtful

Fig. 1.—J. W. M. Photograph of piece of tissue removed from posterior border of scalp, measuring 3½x2½x½ inches, by means of pastes, applied by a cancer-quack. Sub-epidermal surface, which is traversed by some muscular bands, removed from the underlying muscular tissues.

value. It is needless to add that our fondest hopes have not been realized, and after a rich experience covering a goodly number of years, the most sanguine must admit that the results have not been gratifying.

Coley[1] states that "however ardent advocates we may be of surgical intervention, to the exclusion of all

Fig. 2.—J. W. M. Cicatricial deformity resulting from the removal of tissue (see Fig. 1), by means of the cancer-quack's paste.

other methods in the treatment of cancer, we are nevertheless confronted with the fact, that at least 75 per cent. of all cases are, or at some time become beyond the reach of the surgeon's knife." William Watson Cheyne,[2] surgeon of King's Hospital, London, speaking of cutaneous cancer, states, "that the very removal of the local

* Read in the Section on Cutaneous Medicine and Surgery, at the Fifty-second Annual Meeting of the American Medical Association, held at St. Paul, Minn., June 4-7, 1901.

1. Wm. B. Coley: The Practitioner, 1899.
2. William Watson Cheyne: Ibid.

disease, may, in some cases, rid the patient of the disease altogether. The favorable results are best seen in cases of epithelioma affecting the extremities, after amputation. R. Volkmann gives the cures, that is, the patients well three years after operation, as 51 per cent." Allowing for 15 to 20 per cent. recurrences after this period, we can readily see that the knife promises only about 30 per cent. of cures, and then, for the most part, at the cost of amputation of the affected extremity.

Both the profession and the laity have gradually learned to realize those facts, and the nonchalance of the former and the skepticism of the latter have been instrumental in removing these individuals from our observation, to the care of the so-called cancer-quacks. As a direct result the number of these quacks have steadily increased, and in every large community there are not a few who have attained a considerable degree of local eminence, with the reputation of having effected

Fig. 3.—J. W. M. Cicatricial deformity of lip, resulting from the application of a cancer-quack's paste.

a long line of, not failures and recurrences, but successful and permanent cures. A great deal of this reputation, I may dare say, is not undeserved; in place of dejecting the patient with the utter hopelessness of his disease, the danger and uncertainty of a severe operation, or the loss of an extremity, the quack encourages him with hopeful assurances and promises—pledges that are not always plighted.

The agents these so-called cancer-quacks employ, are, for the most part, caustics, preparations of arsenic, zinc, potash, lime, and the common acids. An interesting specimen was recently removed by one of our local surgeons from the posterior border of the scalp. The alcoholic specimen measures three and a half by two and a half inches in its two diameters, and one-half inch in thickness, and has been removed with the subcutaneous tissue, fat, and even with some of the muscular fibers of the underlying tissues; allowing at least a third for shrinkage after hardening in alcohol, the fresh specimen must have measured almost five by four by three-quarter inches. It had been removed in a round, clean-cut manner, by the application of a brownish-red paste, and separated spontaneously, with considerable pain and reactionary inflammation, after

Fig. 4.—Mr. W. K., aged 70 years; epithelioma of 2½ years' duration. Feb. 20, 1901.

Fig. 5.—W. K., March 21, 1901; epitheliomatous ulcer of 2½ years' duration completely healed 29 days after institution of treatment.

an interval of four or five days. The disfigurement from the resulting cicatrix is considerable. Microscopic examination of the removed area reveals the tissues to be in an excellent state of preservation, the

epidermis, sweat and sebaceous glands, hair follicles, and blood-vesels being histologically well preserved. The blood-vessels are extensively thrombosed and at the border where separation from the surrounding tissues has occurred there is very extensive inflammatory infiltration. The specimen was removed from an individual 27 years of age, and the only indication for its removal was a papular, pigmental syphilid. A second area (cancerous?) was removed from the upper lip, and the cancer-quack was engaged in removing a third from the inside of his throat, when the patient, perforce from pain and distress, withdrew himself from his treatment. This cancer-quack enjoys a lucrative practice and an extensive local reputation, and no one can doubt that a remedy of this character can prove thoroughly efficacious in a case of genuine cancer.

Time does not suffice to permit me to take up all the remedies which are extensively used and extolled to a greater or less degree by various members of the profession. I wish to conclude with a brief narration of my results with a remedy which at present is receiving general and favorable recognition. I refer to arsenious acid, mixed with equal parts of pulverized gum-arabic, to which sufficient water is added to make a paste of the consistency of butter, and enough cocain crystals to alleviate the anticipated painful reaction, as recommended by Marsden, Robinson, Gottheil, and Stelwagon. I have found it expedient to add 10 per cent. glycerin before adding water, which prevents the paste from becoming too dry and therefore prolongs and intensifies its action; the reactionary pain is also diminished by the glycerin.

R.	Ac. arsenicosi	
	Pulv. gum acaciæ, āā	5
	Cocain. mur. cryst.	2
	Glycerin	2
	Aquæ q. s.	

M. Ft. paste. Sig.: Apply locally.

The paste is applied directly to the ulcerated surface, after being uniformly spread on a piece of muslin or linen, which has previously been carefully adapted to the affected area. It dries in the course of five to ten minutes, and remains firmly adherent until its removal 12, 24 or 36 hours later is indicated by the pain, intensity of the reaction or the degree of the treatment required. The after-treatment consists in the application of simple, soothing, antiphlogistic remedies, in the form of indifferent pastes, Wilson ointment, combined with cold compresses saturated with the solution of alum acetate. The resulting pain is usually slight, often scarcely sufficient to disturb sleep. There is some reactionary inflammation, in the form of redness and swelling, which is usually limited to the ulcer and its immediate neighborhood.

I have not found it essential to prepare the surface by the application of caustic potash, in stick or solution, green soap, etc., as recommended by numerous authors, in order to cut down the epidermis and to remove scales, crusts, and keratoses, which can interfere by their presence with the action of the arsenic. In one case I felt obliged to remove a crust by means of a compress of oil, applied for twenty-four hours. The application of caustic potash, even though momentarily applied, is exceedingly painful, and its irritating and destructive action being directed against healthy and diseased tissue alike, it is considerable of a gain to be able to dispense with its use.

In most instances one application of the arsenic has been all that was necesary; in several instances I felt obliged to repeat the application for fear the resulting reaction was not sufficiently intense. In one of these cases the ulcer was surrounded by an elevated wall of tissue, epitheliomatous in character, which did not share the reaction; the second application, made twelve days later, remained as ineffectual as the first, and though the wall remained, cicatrization was complete in twenty-nine days. During the following two or three weeks the

Fig. 6.—Mrs. A. K., aged 80 years, April 26, 1901. Epithelioma of 3 years' duration.

Fig. 7.—Mrs. A. K., aged 80 years, May 8, 1901. Epitheliomatous ulcer completely healed 12 days after institution of treatment.

wall also underwent spontaneous involution and has entirely disappeared.

From this I infer that arsenic possesses not only an elective action, exerting its chief influence on the weaker and less stable pathological tissue, sparing the more resistant surrounding normal tissue, but also exerts a specific influence over the cancerous tissue whereby it inhibits its growth and prevents its further spread and development without entailing its direct destruction.

My experience is too recent to permit me to judge of the permanency of the results; its immediate effects are certainly all that can be desired, and if nothing but this crowns our efforts it should hold a very high place as a palliative measure.

I regret that time does not permit me to compare its action with other remedies that have been recommended from time to time, and are in extensive use to-day, namely, formalin[3] (Ravogli), acid nitrate of mercury, pyrogallic acid, zinc chlorid, electrolysis, (Corlett), injections of alcohol, Vienna paste, mixed toxins of erysipelas and bacillus prodigiosus.

As far as my experience permits me to judge, I am strongly impressed that this method of treatment possesses decided advantages over the former methods. It is prompt in results, easily limited and controlled, spares the healthy tissues, exerts a marked specific influence, and produces relatively little distress and subjective disturbance. It promotes prompt cicatrization, and speedily converts a freely discharging, foul-smelling ulcer, filled with soft mushy granulations and flabby detritis, into a firm, clean-looking sore, inhibits the discharge and materially diminishes the inflammation of the surrounding tissues. The peculiar influence it exerts over the diseased tissue, without entailing its actual destruction, leads to the belief that the best results are to follow its application in mild rather than in severe forms; in other words, under-treatment rather than over-treatment is indicated. Time must prove whether or not the results are temporary or permanent in nature, but even in its present form it should prove to be an invaluable agent, if only palliative in nature.

DISCUSSION.

DR. W. T. CORLETT, Cleveland—Although I have not had much experience with the treatment Dr. Heidingsfeld advocates, I have had quite an extensive experience in the treatment of superficial epithelioma. During a period of about twenty years, after a wide range of remedial measures, I have of late years selected electrolysis almost exclusively in the treatment of epitheliomata. I believe it presents many advantages over other methods and even that advocated by Dr. Heidingsfeld. I can further say for electrolysis that it is extremely satisfactory, and while I do not advocate any exclusive method, believing the special requirements of the case should always be considered, yet, as I have observed the results attained by surgeons, the results are to me quite convincing that the methods resorted to by dermatologists are, as a rule, more lasting than when the knife is exclusively used. The method of employing electrolysis is extremely simple; anybody can do it with patience and a little skill. I often use an ordinary McIntosh battery of eighteen cells, which is sufficient to supply electricity for an ordinary operation, lasting twenty minutes to an hour. The patient must first be anesthetized, and when the lesion is small, he may be discharged as soon as he comes out of the anesthetic. Very little, if any, after-treatment is necessary. Of a large number of cases, some of which had existed many years, the diagnosis having been confirmed by microscopic examination, in only one instance, so far as I have been able to ascertain, has the growth returned. In this case the disease had developed beyond the point when any operation holds out much hope.

DR. WILLIAM ALLEN PUSEY, Chicago—I have followed the method Dr. Heidingsfeld suggests, using Marsden's paste and frequently using the zinc lotion recommended by Unna, with most excellent results. I am surprised at the rather pessimistic prognosis Dr. Heidingsfeld gives, for it is a fact that cutaneous carcinomas are the most benign we have and we should expect a good result in all cases not complicated by metastasis. I had occasion to look through my records about a year ago and found that during the first three and a half years of practice that I treated eleven cases of epithelioma, either by curettage or by the application of paste without curettage. In all these cases, except one, there was a microscopic diagnosis. Each one of these cases I have been able to follow and there has been no recurrence. I do not think that is an unusual result with this method; I think Dr. Heidingsfeld exaggerates the importance of these lesions, if they are treated early.

I have lately treated an epithelioma by a new method, to which I would call attention in this connection; I have made use of x-rays. This case has been in existence twenty years. It is a superficial form of carcinoma involving only the skin. It has been treated by the best surgeons in Chicago and they had left a large epithelioma on the shoulder. This was put under treatment by exposure to x-rays, in January of this year. I exhibited the case last week and I do not believe anybody was able to detect any suspicious tissue remaining, the shoulder is apparently entirely healed, although, of course, further time is necessary to confirm the cure.

DR. L. E. SCHMIDT, Chicago—I have had considerable experience in the x-ray treatment of cancer of the skin and up to the present time have not seen any favorable results, although I have practically followed the method used by Dr. Pusey, and originally laid out by Dr. Freund of Vienna. I do not see exactly why the dermatologist should lay the scalpel aside altogether. Without doubt there are a considerable number of cases that can be treated more successfully in a surgical way. Take those cases that border on the mucous membrane, both of the anal and oral, and other regions. In these positions the various pastes that are recommended can not be used with ease or safety.

DR. JOSEPH ZEISLER, Chicago—We have been using various medicinal agents in the destruction of cancer for a long time, but I have noticed during the last two years the enthusiasm with which these so-called quack methods have been taken up by dermatologists of good reputation. In my entire practice I have never made use of such agents, and knowing their constitution I believe I shall never use them because the method seems to me so thoroughly unsurgical, and after all, the treatment of epithelioma should be surgical, understanding by that term the thorough removal of everything that is diseased. It seems to me more rational to do this operation in the cleanest, most rapid manner possible. It seems more reasonable to do it in this way than by the slow course of cauterization, where we can not always limit the operation. I do not desire to be understood as wishing to relegate the treatment of epithelioma to the surgeon, for I believe the dermatologist will always find a field for this work. I am happy to say that some excellent surgeons in Chicago have referred cases of epithelioma to me. When I speak of the dermatologist removing a cancer in a surgical way, I mean by the use of the curette, scraping down to healthy tissue. It is surely possible to remove a superficial epithelioma in this manner. When it has ceased to be a superficial epithelioma I leave it to the surgeon. When it is complicated with deep-seated glandular troubles I do not touch it, because I do not claim to be a surgeon. After thorough curetting it is also proper to have a thorough cauterization, and I have always found the nitrate of silver in substance the best thing to use. There are others in this room who can testify to the excellent results I have had in such cases. In one case an epithelioma of the lip was removed in this way and healed in eight days in the most beautiful manner. As long as we have this clean method of removal

3. Ravogli: JOUR. A. M. A., 1899.

with modern methods of local anesthesia, I will stick to it until I learn of something better.

I want to express the hope, not based on experience but on observation, that in treatment by the x-ray we may perhaps find a valuable resource in this department of medicine. That the x-ray is an excellent means of destruction in lupus we have opportunity to observe in Chicago, where Dr. Pusey has used the method extensively. I believe it is as yet too early to form a definite opinion about it, but I am in hopes that the x-ray will prove to produce excellent results.

DR. BURNSIDE FOSTER, St. Paul—In the treatment of malignant dermatoses where, as is often the case, it is quite impossible without a microscopic examination to discriminate absolutely between cancer, lupus or rodent ulcer, I have had great satisfaction, after having removed everything possible by mechanical means, in the use of superheated air after the Holland method. I hope to show you to-morrow a very beautiful result in the treatment of a case of lupus after this method. So far as the treatment of skin cancers is concerned, it seems to me quite impossible to lay down definite rules which will apply to all cases and it seems rather a waste of words to attempt to do so. Undoubtedly, some cases are best treated by excision and some cases are best treated by erasion followed by the application of some caustic. Where it is quite evident that, by either of these methods, the growth can be entirely removed, we must be guided by the probable cosmetic result. I have had considerable experience in the destruction of skin cancer with caustics and I shall never be persuaded that the knife could have accomplished such beautiful cosmetic results as I have seen by these methods.

DR. D. W. MONTGOMERY, San Francisco—In the treatment of epithelioma you simply have to destroy it, with the curette, chromic acid, nitrate of silver, arsenic, or with the knife, but you must destroy it. The great advantage the physician has is in knowing a large number of methods of slow destruction. The arsenical method is undoubtedly a good one, but in looking over the literature I was impressed with the variation in strength of these arsenical preparations; it is wonderful how various these strengths are. Marsden himself never used a paste weaker than 50 per cent., nor stronger than 75 per cent. To my mind 50 per cent. seems to be the least that one can use in order to get a good cautery. There are a number of cases where you can not use arsenic, and there are quite a number of other cauteries you can not use. For instance, a man was sent to me with an epithelioma on the back of his hand at the base of the finger that had developed on a scar. I could not use arsenical paste on that for fear of eating into the tendon sheath. I did not want to use a curette for the same reason; in fact, I did not want to use anything on it but the knife, so I sent him to a surgeon and it was so removed, and I think it was taken out thoroughly. I would not for a moment think of discarding the knife, and I would not think of discarding the actual cautery. French authors prefer the actual cautery. When a chemical is indicated I think the one they use most frequently in Paris is caustic potash. It is an admirable caustic. I remember the case of an old lady from whom I could not have removed a cancer of the nose with anything else. She was very nervous and would not stand the sight of any instrument, and she would not stand the injection of cocain, but in the course of a sitting I ploughed the growth with a caustic potash stick. I suppose it caused her a good deal of pain, but pain does not trouble these people. Having become accustomed to the application of arsenic I do not think I shall ever entirely give up its use.

DR. DAVID LIEBERTHAL, Chicago—Every method of removing cutaneous cancer without a cutting operation is valuable, and especially so if it does not cause much pain. We should not forget that there are patients who would not submit to an operation. That hot air, concerning the efficacy of which Dr. Foster spoke, might give good results; I can readily understand, considering the coagulative properties of heat, which will most readily affect diseased tissue. The first cases treated by x-rays were reported by Drs. W. Johnson and W. H. Merrill in the *Philadelphia Medical Journal*, December, 1899; and at the International Congress of Paris, 1900. Dr. S. Steenbeck reported two cases, one of which developed upon the base of a lupus vulgaris. These cases, which were all of limited size, resulted in cure. In a case of epithelioma which I reported May 25, 1901, in THE JOURNAL of the American Medical Association, and which was the size of the palm of the hand, the x-ray was applied for a period of three months by Dr. Haiselden. At first there was noticed a decrease in the secretion and some flattening of the tumor, but in the further course the tumor increased and surgical interference was resorted to. This case did not extend beyond the fascia. It is my opinion, considering all these cases, that the x-ray should be tried in all cases of epitheliomas of small size, but in those of larger size other methods will have to be employed.

DR. C. W. ALLEN, New York City—The treatment of cancer in this way was originally advised by reputable physicians and it was only because quacks took it up, it seems, that we dropped it. Now, after these many years, we have for some reason taken it up and I think it has gone far enough in this renaissance to prove to us that the method is excellent and not to be dropped again, especially the use of arsenic. Electrolysis I have also used, but rarely as the sole method of treatment. I often use it in connection with other treatment to destroy outlying suspicious changes from the normal vascular dilatations, little outgrowths at a distance. Occasionally I have used it as the only method, with great success. Just before starting from home I saw a man in whom three years ago I removed an epithelioma from beneath the eye, using nothing but the needle, and he had as soft a scar as one could wish for.

I failed to gather from Dr Zeisler's remarks that he differs from the rest of us. I think most of us are inclined to curette before paste is applied, especially if there is no base that can be acted upon quickly by the arsenic. We all have our preference as to caustic, most of us using arsenic, some caustic potash and others nitrate of silver. Patients come to us as dermatologists because they refuse to be subjected to the knife and they will nurse their cancer and will die with it, if necessary, or let it go on to the destruction of an eye, or whatever organ it may be, rather than to have it operated upon with the knife. If they come to us and we offer them nothing but the knife there is nothing for them to do but to go to the quack. I think we should bear that in mind and offer something they will accept. You can curette without letting them know you are doing a surgical operation. I never say to a patient: "I am going to curette you and it will cause bleeding." I simply curette them and then apply caustic, or whatever I am going to use. I do not confine myself to any one method; I wish to speak of a combination method I have carried out. That is, after applying arsenical paste, which I mix with orthoform instead of acacia, and put in crystals of cocain, I put on arsenic solution, namely, arsenic, alcohol and water. I make daily applications of this and if I have missed any cancerous tissue the arsenic continues to attack it. The wound heals quickly and there are no cicatrices.

Just before leaving New York I saw a man who had had epithelioma of the penis. Dr. Leusgarten had examined the tissue and pronounced it epithelioma, and it seemed to me clinically unmistakable. I had applied the Bogard paste, which contains besides arsenic, zinc chlorid. That was eleven years ago and the man has remained perfectly well since. I do not advocate the use of arsenic in epithelioma of the penis, unless you get the case early. I have recently used this method in six or eight cases of epithelioma of the lip. Three were rather remarkable as to age, being 23, 26 and 28 years old. I have seen these men subsequently and they appeared to be cured, with a soft cicatrix. If we can do this with superficial epithelioma of the lip we can do it in epithelioma of the penis; the tissues of the penis resist invasion and it is a long time before the glands are enlarged.

In regard to epithelioma on the back of the hand, I think caustic is applicable there and I have used it in epithelioma of the palm, with a perfect result. One case was a recurrence; it was the mother superior of a convent, and the cancer returning I used caustic paste. The palm healed beautifully and I do not think it has returned. Arsenic is not apt to go into the

tendons; it does not have a tendency to attack healthy issue. With zinc chlorid there is danger of the healthy as well as the diseased tissue being attacked. I think if we combine several treatments, using, if necessary, two or three in some cases, we will do better than the surgeon can do. That is my impression after using these methods twenty years.

DR. A. W. BRAYTON, Indianapolis—Where so many speak we learn many things, and some that are not true. Nothing is so amusing as the talk about the benign tendency of arsenic by which it avoids normal tissues and selects the epithelial growths. That does not appeal to me; I do not think it has pathological or clinical support. I will say, however, that in the case of xeroderma pigmentosum I have had under observation for eight years, and that of her sister who has been under my observation since birth with the same disease, the inhibitory tendency of arsenic has been very satisfactory. After the tumors are raked out with a sharp finger-nail or spoon the application of a mild solution, even Fowler's solution, seems to inhibit their further growth.

The statement made this afternoon that impressed me most is that the old people who have cancerous growths to be removed bear the pain well, but they are victims of terror; they dread the knife and they dread the actual cautery. I do not think we err in removing cancer of the lower lip by grasping the lip between the thumb and finger, cocainizing it, scraping it with a sharp spoon, and then using the actual cautery or acid nitrate of mercury. I frequently use the Paquelin cautery in such cases.

I agree with Dr. Zeisler that we should work in a cleanly way, but I think the application of such caustics as we can control in our office, the removal of the epithelioma with a spoon, followed by the application of carbolic acid to deaden the nerve, then the acid nitrate of mercury, is a cleanly and efficient treatment. I give them half an ounce or so of acetanilid to apply to the wound from time to time and find it sufficient. Orthoform combined with arsenic may have a beneficial action, but I doubt its anesthetic action under such conditions.

DR. M. L. HEIDINGSFELD, in closing the discussion—In regard to the prognosis being rather pessimistic, it is not my own; because my experience has been entirely too limited to permit me to express myself on a subject of that character. The opinions I have given from the literature are those of Coley and Cohen, and one or two other men. I have investigated very carefully, and nearly all the men I had occasion to look up have given a guarded prognosis in epithelioma or cutaneous cancer.

In spite of the statement of Dr. Brayton and others this afternoon, I am firmly of the opinion that arsenic does possess an elective, specific action in cancer. I have had several cases, all over 65 years of age and some as old as 84, all typical looking epitheliomas, some having the characteristic wall, slightly turned out, infiltrated and hard. Anyone who has done extensive pathologic work knows that the border in particular shows the characteristic pathologic condition. I was fearful of my results, that these ulcers would not heal; the walls have disappeared. I can only account for that by supposing that the arsenical paste has an elective action, because it does not destroy the tissue but inhibits its growth. This feature makes it a more desirable drug than anything else we have. All other processes that destroy the tissue act on the normal tissue as well as the pathologic tissue. In these cases the treatment is very satisfactory, the ulcer needs to be undertreated rather than over-treated.

As to whether the knife is more applicable than a method of this kind, that will have to be demonstrated by results. It does not matter very much whether it is the knife or the application of a drug, as long as we get results. If we have an agent which clears up these ulcers in a comparatively short time, and I have had them clear up completely in four to six weeks, that is certainly as well as any result we could obtain by surgical intervention.

As to whether arsenic can be applied on the back of the hand, I take it that it can be applied anywhere, with the same result. If the treatment is not carried out extensively there is no reason why it could not be applied to these areas as well as to others.

RELATION OF SYPHILIS TO BLASTOMYCETIC DERMATITIS.*

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Since the discovery of actinomycosis hominis by Israel, in 1878, it has been shown with the aid of microscopic preparations preserved in the laboratories of Europe, that cases of this disease were previously observed and reported as cases of sarcomata; cases of mycetoma have been proven to be caused by actinomycosis; the disease has been found in the brain; it has been observed under the clinical diagnosis, appendicitis; Neisser has reported a case which he at first diagnosed as a papulo-pustular syphilid, but which on further examination proved to be actinomycosis cutis, and, lastly, branching forms of the bacillus tuberculosis have been found in the lungs which Hektoen[1] tells us can not be distinguished from actinomycosis pulmonalis.

Ever since observing the case which my colleague, Dr. Herzog, and I reported last year as a case of blastomycetic dermatitis engrafted on syphilitic ulcers,[2] I have entertained the opinion that should it become established that blastomycetic dermatitis is a distinct disease, it was destined to have a somewhat similar history.

The first cases were discovered hidden away under the diagnosis tuberculosis verrucosa cutis. My case showed that a search should be made among the fungous syphilids, and it suggested other possibilities of diagnosis. The object of our present communication is to explain our views in greater detail, and to answer the many objections which have been raised to my opinion that there was a syphilitic basis to this case.

It will be recalled that the patient stated that for sixteen years ulcers, which he described as simple ulcers, were continually appearing and disappearing on the anterior surface of the leg; these ulcers left scars, some of which were quite deep, others superficial, having a semi-circular and stellate arrangement (symptom of Fournier), and that at the end of sixteen years those of these ulcers which were in a state of activity suddenly took on a changed appearance; they became covered with little warts, and, starting from these lesions, this wart-like eruption spread upward over the thigh, so that at the end of four years the entire thigh was one enormous plaque, covered with wart-like papillæ, the upper border of which was limited by a deep, firm infiltration, and seven months before the patient came under our observation, frambesiform lesions, which produced a very offensive discharge, developed on the foot. The patient never entirely recovered.

In treating of the vegetating or papillomatous and frambesiform syphilids, Kaposi[3] says: "It is a fact that vegetating formations frequently develop on specific nodules. They are not in themselves specific, inasmuch as they correspond, histologically, to those which develop on a simple inflammatory base, and, like these, originate from an exuberation of granulations or hypertrophy of papillæ, the same as in condylomata lata, the base alone being syphilitic. They can only be recognized as syphilitic by the characteristic infiltration or ulceration of the border."

If this statement is correct, the most rational explanation of these vegetations which sprout on a syphilitic base is that they are due to a secondary infection. The micro-organisms which are present in these growths

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have not been sufficiently studied, but the striking resemblance of some of the cases to blastomycetic dermatitis and their clinical history certainly suggest the possibility of this disease being discovered among these fungating syphilids.

Like blastomycetic dermatitis, these syphilids are rare; they are papillomatous fungating plaques; lasting for years; involving enormous areas of cutaneous surface; sometimes steadily progressing during their entire course, and sometimes remaining in a quiescent stage for a long time, to suddenly take on great activity of development. They are exceedingly rebellious to treatment; at times finally disappearing under the administration of potassium iodid, only to reappear at some future time, and at other times only partly disappearing under treatment.

Were they due to ordinary pyococci they would be common, and we would not expect them to last so long and to steadily extend in spite of antiseptic treatment.

When potassium iodid is administered in cases of blastomycetic dermatitis, a peculiar reaction may sometimes be observed in the plaques; an inflammatory exudate is thrown out around and upon the lesions which, when the lesions are superficial and small, resembles very closely the reaction which occurs in lupus vulgaris after an injection of Koch's lymph. Where the lesions are deeper and their base is markedly infiltrated, the infiltration increases and the plaque increases in size, and sometimes ulceration of the plaque occurs. This reaction is usually accompanied by iodism. These changes have been observed in syphilis.

The objection has been raised to my assigning a syphilitic base to my case that the histo-pathology was distinctly the histo-pathology of blastomycetic dermatitis and not the histo-pathology of syphilis.

We have never said that the histo-pathology of this case was the histo-pathology of syphilis. What we have said, and what we now wish to emphasize, is that this was a case of syphilis cutanea vegetans of Kaposi. We took it for granted, and we had a right to, that every dermatologist would know that there was something special regarding the histo-pathology of syphilis cutanea vegetans of Kaposi.

Thirty years ago Kaposi[4] said that there was something special regarding the histology of these vegetating syphilids, inasmuch as they resemble common warts on microscopical examination. To-day Unna[5] says: "Under certain conditions the epithelium growth which develops on tuberous syphilids may, without atrophy of the epithelium, undergo a peculiar change, which causes it to resemble certain cancers, especially the rodent ulcer." In some cases, then, these eruptions resemble the rodent ulcer; in other cases, the common wart.

Blastomycetic dermatitis, when viewed with one-fourth power lens, so closely resembles the rodent ulcer that if a section be given to a competent pathologist, but one who is not on his guard for blastomycetic dermatitis, he will, as I can assert from personal experience, almost invariably report that it is a section from a rodent ulcer. In my case a few sections showed the wart structure, as described by Kaposi.

The findings with the oil-emersion are to be left out of consideration in this discussion, because the syphilids have not been sufficiently studied with the oil-emersion.

In criticism of our diagnosis, it has been pointed out that there was no history of syphilis in the case. We do not feel called upon on this occasion to enter into an extensive consideration of that cardinal principle of diagnosis, which has no place in scientific discussion outside of under-graduate instruction, namely, that a negative history of syphilis counts for nothing in the diagnosis of tertiary lesions; as a matter of daily clinical experience, cases may be seen in any dermatological clinic which may be diagnosed as syphilitic almost to a certainty without there being any history of previous syphilitic disease.

Of far greater importance, to my mind, is the objection that in each and every case of blastomycetic dermatitis which has been reported to date there is a negative history of syphilis. A negative history of syphilis counts for nothing in the diagnosis of an individual case, but if it can be shown that there is an entire class of cases in which the history is negative, it is a matter of the utmost importance. A review of the cases reported since the original article of Riehl and Paltauf, in 1886, to date, in which the differential diagnosis rests between cutaneous tuberculosis other than lupus and syphilis, and which were diagnosed syphilis, shows that there are but few in which there was a clear history of syphilis, and, furthermore, we will point out the fact that there are not many of these cases in which there were present lesions or lesion relics, such as might be produced by syphilis, but are not known to be produced by blastomycetic dermatitis or tuberculosis verrucosa cutis, such as perforation of the palate, *le nez a lorgnette*, periosteal nodes, etc.

These facts are capable of several interpretations. The next point for discussion is whether the clinical picture presented by this case was the clinical picture of tuberculosis verrucosa cutis or syphilis cutanea vegetans. This involves a discussion of the differential diagnosis of these diseases. That they are to be differentiated may be easily established. Riehl and Paltauf[6] say that not every plaque, the surface of which is covered by wart-like papillæ, is to be diagnosed their dermatosis, but only those cases in which all the symptoms taken together present the clinical picture which they describe. Brugger[7] says that syphilis sometimes so closely resembles tuberculosis verrucosa cutis that a differential diagnosis can only be made by the administration of potassium iodid.

Nearly all German writers agree that one of the chief points in the differential diagnosis of these diseases is that the outer zone in tuberculosis verrucosa cutis is a lilac-ring, as Besnier calls it, which almost entirely disappears on pressure, while in syphilis the outer zone is a distinct, firm infiltration, such as was present on the upper border of our case. Where there are a number of lesions present they do not all present the indurated border, and clinical experience has taught me that the induration may be entirely absent, and still the case be syphilitic, a point not mentioned by German writers, although we find in German literature reports of cases in which induration was not present, of which the following, reported by Ostermayer,[8] of Buda Pest, is an example: "The patient, a woman, aged 31 years, presents a lesion on the chin and cheek which is the size of the palm of the hand, and has been present a few months. On examination, the lesion is seen to be a plaque of a pale-red color, with a warty, papillomatous, uneven surface. The plaque rises abruptly from the surrounding healthy skin, just as the surface of a lawn rises above a surrounding walk. It is of oblong form and ulcerated only in two pea-sized places. The papillæ are 8 to 10 mm. high, and 2 to 3 mm. wide. The surrounding skin is normal, and the plaque is as if set into normal skin. When first seen the case was diagnosed

'lupus papillaris,' but when no lupus nodules were found on the periphery of the lesion, the patient was stripped, and ulcerating gummata and periosteal nodes of the tibia were found, which were sufficient for the diagnosis, even in spite of a negative history." This is one of the few cases of this kind in which lesions were present which, so far as is now known, are not produced by blastomycetic dermatitis, but are produced by syphilis, and were this patient to present herself in any dermatological clinic of this country to-day, the lesions would be immediately examined for the presence of blastomyces.

The next point is the size of the plaque. Most authorities agree with Jackson,[9] that a fully developed patch is the size of a silver dollar.

Besnier and Doyen[10] speak of very large plaques, which they state are always fissured; their writings convey no idea as to how large these plaques may become, so that the only means at our command of forming an idea of the size which the plaques may attain is a review of the cases which have been reported, and nowhere can we find a case co-extensive in size with that of the entire thigh.

All authorities agree that tuberculosis verrucosa cutis is a disease which develops very slowly. Joseph[11] says that it takes fifteen to twenty years to form a full-sized plaque; others say from three to fifteen years. In one of Fabry's[12] cases, the disease involved one-third of the back of the hand in two years' time, which is rapid development. We can find no case where a plaque the size of the entire thigh formed in four years, as was observed in our case.

The following case, entitled "A Papillomatous and Ulcerating Lesion of the Forearm of a Doubtful Nature," reported by Brocq,[13] illustrates the importance this authority attaches to rapidity of development as a point in the diagnosis of verrucous tuberculosis:

"The patient is 59 years old, apparently healthy. For the past eight months he has had a lesion of the left forearm, regarding the nature of which I would be pleased to have the advice of my colleagues. At the present time it consists of a plaque, slightly oval in form, the long axis of which is from 5 to 6 centimeters in length, situated near the median line, and slightly internal to the anterior surface of the forearm. It presents an outer zone of redness, which is slightly violaceous, disappearing partly on pressure. The tissues of this zone are a little infiltrated, and the infiltration increases towards the center, and decreases towards the periphery, without any sudden demarkation from the healthy skin, but the limits of the lesion are sufficiently marked by the color. The skin in this zone is smooth and devoid of apparent superficial lesion. Inside of this zone there is a median portion much more irregular where the integument is mammillated, cut with deep fissures, as if torn open, and pseudo-papillomatous. One might say that the skin has been excavated by numerous small ulcerations, the borders of which are granulating. The tissues in this part of the plaque are soft, but deeply infiltrated. On pressure a purulent serum exudes from divers openings, but in small quantities. The physiognomy of the entire patch is not that of a gumma, either tubercular or syphilitic, but, on the contrary, more that of tuberculosis verrucosa cutis of Riehl and Paltauf. It is not painful either spontaneously or on pressure. It developed rapidly in two months: it then became papillomatous, markedly indurated, and formed a decided projection. It appears that the patient has had several lesions resembling furuncles, which he scratched, and this lesion is a transformation of one of these furuncles. The only two diagnoses which appear probable to us are, 1, a variety of tuberculosis approaching, as we shall see, verrucous tuberculosis of Riehl and Paltauf, but the development has been *so very rapid*, and, 2, an inoculation of some parasite, which has produced a lesion resembling the Briska button. This last diagnosis is impossible, because the patient has always lived in France, and also because it has not exactly the appearance of the Briska button."

In closing the discussion, Brocq remarked that it resembled most of all tuberculosis verrucosa cutis. Were this case to present itself in any dermatological clinic of this country to-day, there can be no question but that the first diagnosis which would be considered would be blastomycetic dermatitis.

In addition to the importance which Brocq attaches to the rapidity of development, it should be noted that the case impresses the observer as being a secondary infection. The induration present in this case is also to be borne in mind.

The frambesiform lesions of the foot developed in seven months' time. There was no disease of the subjacent bone, as is usual in large plaques of tubercular vegetations, and the secretion from these plaques was of the very offensive nature mentioned by Kaposi as one of the symptoms of syphilis cutanea vegetans.

From these findings it will be seen that a syphilitic base was assigned in this case, on the following evidence:

1. That for sixteen years ulcers were appearing and disappearing on the anterior surface of the leg, leaving scars which resembled syphilitic scars; at the end of sixteen years the ulcers then present took on a changed appearance; they became covered with little warts, which spread rapidly.
2. The infiltrated border.
3. The size of the patch and rapidity of development.
4. The histo-pathology.
5. The character of the frambesiform lesions.
6. The result of treatment.

These symptoms are certainly sufficient to exclude tuberculosis verrucosa cutis, and with that disease excluded, one of two propositions is correct: either ours is a case *sui generis*, the like of which has never before been observed in the history of medicine, or else such cases have been previously observed, but have been reported under some other head than that of tuberculosis verrucosa cutis. Inasmuch as the opposition has not claimed that such cases have been heretofore reported under any other head, than those mentioned, we are justified in concluding that such cases are either *sui generis*, or syphilis cutanea vegetans, and that point we have sufficiently argued.

The question will immediately occur to your mind: Do the above-named symptoms absolutely establish a syphilitic base to the case in question, in view of our present knowledge of blastomycetic dermatitis?

It must be acknowledged that if blastomycetic dermatitis be recognized as a distinct disease, these symptoms are totally insufficient, but inasmuch as they are the symptoms on which our diagnosis has always depended, they must stand until blastomycetic dermatitis is fully recognized as a disease. Zeisler[14] says: "The question is whether we have a right to overthrow well-defined, sharp and precise clinical pictures which we have always recognized, on account of the occasional occurrence of these organisms." All German authorities

who have expressed an opinion on the question of blastomycetic dermatitis have taken a most conservative stand.

Jadassohn[15] simply says: "Potassium iodid, which usually acts quickly in late syphilis, can influence actinomycosis, and, as has been recently stated in one case, it can exert an influence on blastomycosis, but it has no influence on tuberculosis."

In his recent text-book, Jarisch[16] says: "The proof that blastomyces are the cause of skin diseases must be left to further investigation, as well as their importance in the etiology of tumors."

Kromayer[17] is most emphatic in his statement. He says: "Buschka's case is especially characterized by the fact that cultures inoculated into the skin of the patient himself produced cutaneous ulcers like the original. In this respect this case differs from any case reported to date, not excepting the case reported by a triumvirate (Hyde, Hektoen and Bevan), which resembled tuberculosis verrucosa cutis. In this case yeast fungi were found, which were assigned as the cause of the disease. They did not produce fermentation of sugar, and they only produced slight symptoms of disease in animals. In this case, as well as in all other cases, it is advisable to place an emphatic query after blastomyces as a cause of disease. To date the Buschka case is the only case of blastomyces in the human race."

Pelagatti[18] has obtained a *pure culture of blastomyces from a case of lupus.*

Ricketts[19] has isolated three varieties of blastomyces from seven of Professor Hyde's cases.

In discussions before the Chicago Medical Society it has been stated that these eruptions contain not three, but seven, different varieties of blastomyces. I can not conceive of a disease being due to seven different varieties of a given micro-organism. There are a great many varieties of actinomycoses, some of which are saprophytic, and the same must be true of these micro-organisms.

A study of the history of the fungating syphilids shows that in the past from time to time first one disease and then another has been excluded from this classification. Kaposi has participated in this work of sorting out diseases from among these vegetating syphilids, and it is very possible that the time has now arrived when we will be able to separate one more disease, which has heretofore been concealed among these eruptions. There are several facts which might be mentioned which support this contention, but there are a good many which indicate that such is not the case. It is a matter of doubt. There is very little evidence in support of the contention that blastomyces is the cause of the disease.

Before any conclusion can be arrived at, a thorough study of blastomyces occurring in cases of surgical tuberculosis must be made.

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DISCUSSION.

DR. J. NEVINS HYDE, Chicago—I am already on record on this question and have nothing to add to what has been already set forth in print. I would like to ask Dr. Montgomery to say something about an interesting case, of which he has full records, and which we regard as the missing link between the cutaneous forms of blastomycosis and those in which there has been visceral involvement, as in the well-known record made by Busse and Buschke of their patient.

DR. F. H. MONTGOMERY, Chicago—There are two or three interesting points in regard to this particular case, which has been under observation for a number of years. There was a diagnosis of syphilis or carcinoma and tuberculosis, the case being passed upon by competent pathologists. I showed it to at least a dozen excellent pathologists in this country and Europe, and each one said it was not tuberculosis, it was not syphilis, it was not carcinoma. The nearest they could come to it was that it was syphilis and tuberculosis. The case was considered unique. I will not go into details, the primary records, which were lost, have been recovered and the slides are in our possession showing infection of the lungs with blastomyces. The clinical history pointed to systemic infection and the man died of infection resembling recurrent attacks of pneumonia. In the other cases, twenty-five or fifty of them, having a distinct clinical type of cutaneous lesion, differing as a whole from all other known dermatoses, blastomyces have been found in the tissue, in many of them a dozen or more have been discovered. From these organisms animals have been inoculated and lesions produced in internal, deep-seated organs, blastomyces recovered and again cultures produced and cutaneous lesions developed. We are not able to produce these typical lesions in man. We can not take lesions from a typical verrucous cutis and produce them on the skin. Regarding the statement of authorities previous to any knowledge of blastomycosis, these men knew tuberculosis, they know syphilis and they recognized cases that did not belong to either category; they tried to assign them to some known disease.

DR. JOSEPH ZEISLER, Chicago—Inasmuch as Dr. Anthony has honored me by expressing an opinion I gave some time ago, I feel that it is my duty to place myself on record by stating that I am rapidly coming to the opinion held by Dr. Hyde, Dr. Montgomery and others who look upon this group of cases so far observed as belonging to a distinct entity and probably due to a peculiar organism. My change of mind is largely due to clinical observations made possible by the presentation of a series of cases by Drs. Hyde and Montgomery which seem to me remarkable. As long as we could judge these cases only by pictures I had doubts, but I have recently had occasion to see the difference of observing a disease on the living subject and I am almost prepared to say that the next case of blastomycosis that comes to me I will not wait to judge from the clinical lesion. I believe all of us who can look back over an experience of twenty years in dermatology, if we could go over our cases, would find one here and there that baffled us; sometimes there was a diagnosis of vegetable syphilid, sometimes of a peculiar tuberculosis of the skin, sometimes a new formation, and so on. I think Dr. Hyde and Dr. Montgomery deserve a great deal of credit for placing the clinical picture of this disease in such shape that we shall soon be able to recognize it without the aid of the microscope. They have demonstrated in all their cases the same micro-organisms, which are not found elsewhere, and the value of their discoveries should be recognized.

DR. A. W. BRAYTON, Indianapolis—I do not recall anything more interesting in dermatologic discussions than the report of the Dermatological Association at the meeting in Washington, unless it be the frank statement of Dr. Zeisler in regard to his present attitude on this subject. Of course, on the outside we recognize that there have been two camps in Chicago regarding blastomycosis and its relations to syphilis and

tuberculosis. It has been my fortune to meet three cases, which occurred in our city, of which I have made some notes embodied in a paper I shall present to the Section. I am familiar with the opinions of gentlemen living in localities where this disease has not occurred, Drs. Bowen and White of Boston and the group of New York dermatologists, in whose practice it has not been met. I had in mind with that group Dr. Zeisler until his very frank admission this afternoon that he, like Dr. Johnson, of New York, may have entertained for a time erroneous opinions in regard to the etiology of that very definite clinical condition that goes by the name of blastomycosis of the skin, blastomycetic dermatitis—the name given by Gilchrist and which out of courtesy to his work will go down in history as the proper name for this disease. I am glad that Dr. Johnson, after having conversed with Dr. Welch, of Johns Hopkins, and gotten his views in regard to the etiologic relationship of the yeast plants that are found in the lesions, modified his conclusions, as Dr. Zeisler has done this afternoon.

I was struck with Dr. Zeisler's statement, and have included the same views in the notes I have prepared for presentation, that if he were to see in his dermatologic practice now a disease presenting certain features he would promptly regard it as blastomycosis upon the clinical presentation alone. I have only seen three cases. I saw Dr. Hessler's case, and am reminded that these yeasts differ under different cultures. The yeast in Hessler's case, Plimmer's yeast, and the yeast in the case I diagnosed on April 10, and discharged as cured just before coming here, differed. I regard it as a very simple thing to diagnose in the two cases I have met and studied clinically, and the accounts I have read of other cases coming directly under the care of gentlemen in Chicago, agree with my own; it is quite possible, I think, when you see a case in your office to conclude that it is blastomycosis. You take it in connection with the clinical progress; rule out syphilis; rule out tuberculosis; rule out cancer and you have an entirely different clinical picture. Take the last case I had, a woman of 23, who eighteen or twenty months ago had a slight abscess on the finger, which spread in spite of various treatments until it involved nearly the entire surface of the little finger and part of the ulnar surface of the right hand. The inflammation, the irregularity, the excessive pain, a boring, constant pain at night, which were present in these two cases I think of great value in the diagnosis. It is a matter of considerable interest that these cases should have developed to such a great extent in Chicago, and the dermatologic profession is fortunate, I think, in having men there who took it up with the insistence and persistence they have shown. It is good that they were divided into two camps for study and research, bringing out the full details of these cases; such papers as Dr. Anthony's are highly stimulative. But I am surprised that so many pathologists, going over their material for a long time back, did not find the yeast plant in the tissues. I presume there are good reasons for it; most likely its absence. We have no explanation at hand for its prevalence in Chicago. There are certainly localities where yeasts are abundant.

DR. R. R. CAMPBELL, Chicago—Dr. Anthony's paper recalls a case we met with at the Policlinic about five years ago, which, with our knowledge at that time, we diagnosed as syphilis, but the microscopic findings presented something peculiar, the nature of which was never determined. The patient was placed on iodid of potassium and in three days returned with marked iodidism, claiming that he had caught cold, the eruption presenting an inflammatory reaction which the patient described as erysipelas. He was kept on the iodid for some time and in about six weeks the eruption entirely disappeared. Up to the present time no further manifestation of the eruption has been noted. That these cases, with those of actinomycosis and syphilis, disappear under the iodid is rather unfortunate as no stress in the diagnosis can be laid on the fact of their disappearing under the iodid. To my mind there is no question but some cases of syphilis very decidedly resemble blastomycosis as described by Dr. Hyde, and as shown in some cases I saw through the courtesy of Dr. Hyde at the Chicago Dermato'ogical Association. I do not think, however, that Dr. Hyde claims, as Gilchrist says he does, that it can be clinically and positively diagnosed at the present time.

As to the disease occurring more frequently in Chicago than in other places, I do not think there is any peculiarity about that. The disease was taken up there and investigated by Drs. Hyde, Montgomery and Ricketts, and it simply shows more industry on the part of Chicagoans than others.

DR. MAXIMILIAN HERZOG, Chicago—It appears highly probable that the condition which has been called blastomycetic dermatitis is a disease *sui generis*. I do not feel competent to decide from a clinical standpoint whether this disease is to be always looked upon as a primary condition or whether it may be engrafted upon syphilis or tuberculosis. It is certain that the disease under discussion presents a characteristic histopathology. We find the following: An extensive proliferation of epithelial structures. The epithelial cells in proliferating form pegs which penetrate deeply into the derma and the subcutaneous connective tissue. We do not, however, find, as we do in carcinoma, a tendency to form well-defined alveolar nests. In the proliferated epithelial structures we find small miliary abscesses, the abscess cavity being filled with ordinary polynuclear leucocytes, eosinophilic cells and plasma cells. It is right here in these abscesses where we find the double-contoured micro-organisms which have been called blastomycetes. Drs. Hyde and Montgomery and their associates certainly ought to be complimented on the great enthusiasm with which they have taken up the subject of blastomycetic dermatitis and upon the extensive results they have obtained. I have had an opportunity to examine a number of pure cultures and micoscopic preparations derived from their cases and presented at one of the last meetings of the Chicago Pathological Society. From the statements then made by Dr. Ricketts, who did most of the microscopic work in connection with the cases of Drs. Hyde and Montgomery, and from my own observation then made on their material, it appears to me that from their cases were obtained three kinds of micro-organisms: 1. A type which does not form any spores and which therefore would have to be classed with torula or oidium. 2. A type which forms spores and which ought therefore to be classified as a true saccharomyces. 3. A micro-organism which forms a mycelium which divides dichotomously and which forms spore-bearing hyphen. The latter micro-organism approaches in type such higher moulds as aspergillus and verticillium.

I believe Dr. Montgomery is mistaken when he says that Dr. Ricketts succeeded in changing one of these forms into another by merely transplanting on different culture media. To the best of my knowledge Dr. Ricketts never succeeded, for instance, in changing a non-sporulating form into a sporulating form, or vice versa. In view of these facts it appears to me that the etiological relation between these different types of micro-organisms and blastomycetic dermatitis is not yet fully established, because it seems somewhat strange that micro-organisms so different in type should produce an absolutely identical histologic picture. The case of actinomycosis which has been cited is not fully identical with the present case because the different forms of actinomycosis do not vary as much as the different forms of micro-organisms found in the skin disease, now generally called in our country blastomycetic dermatitis, do vary. We must consider the possibility that the micro-organisms found are present only in a symbiotic relation in our disease and that the true cause of what we call blastomycetic dermatitis may be still hidden away from us. You know that yeast-like micro-organisms have been found by San Felice in sarcoma, yet we can not consider that their etiological relation to sarcoma is fully established. The same, it appears to me, is true of blastomycetic dermatitis. Yet, be this as it may, I can only repeat what I said before, that Dr. Hyde and his associates deserve all possible credit for the work which they have done in connection with the disease under discussion.

DR. F. H. MONTGOMERY, Chicago—Dr. Ricketts did not intend to make a positive statement classifying these under three different heads. He has not demonstrated to his entire satisfaction spores in any one organism. There are highly refractive buds, but none have been found distinctly in the cap-

sule. The spores have not been cultivated. The truth is that investigators are not yet ready to give us a definite classification of these organisms. Another fact along the same line is that investigators have demonstrated a number of distinct species which are pathogenic, so it is not necessary to limit the origin to one species of blastomyces. As to the posibility of it being a bone tuberculosis or bone syphilis, of course we can not say. We are accumulating evidence and are trying to present it but are not drawing absolute conclusions as yet. With a series of cases of these very severe, extensive lesions lasting from two or three to ten or twelve years, where there is no history and no other evidence of syphilis; it is certainly a strong argument against syphilis.

DR. HENRY G. ANTHONY (closing the discussion)—At the recent meeting of the American Dermatological Association I had the pleasure of listening to a paper on blastomycosis by the president of the Association, Dr. Shepherd, of Montreal. He showed lantern slides of cases of very peculiar granulomata which had passed under his observation in times past, and which he stated he would examine for blastomyces, were they to come under his observation to-day. His remarks recalled to my mind figure 216, page 733, of Taylor's work on "Venereal Diseases," edition of 1895, which is cut of a papillomatous syphilid such as we have under consideration; consequently I showed this cut to Dr. Shepherd and asked him if he would examine such a case for blastomyces; he said he would and that the fact that blastomycosis is influenced by potassium iodid convinced him that cases of this disease had been heretofore reported as cases of syphilis. I refer to this matter with the Doctor's permission.

I hope that I have not given the impression that I have not a full appreciation of the work done by Professors Hyde and Montgomery. I do not think there is anyone who appreciates any more fully the value of their work than I do. Dr. Montgomery states that he has not drawn any positive conclusion in regard to this disease; neither have I. I distinctly stated that I had not drawn a positive conclusion and that I hesitated as to whether we might look upon the disease as a distinct entity.

In regard to Dr. Hyde's remark about Dr. Bowen, I wish to say that I had no intention of quoting Dr. Bowen in regard to the relation of blastomycosis and syphilis. I thought that the way I worded it was clear. He referred to the subject in general; he meant he was not absolutely convinced that blastomyces caused the disease.

In regard to the distinct clinical type, I think I can pick out a case of blastomycosis as well as almost anyone; but at the same time I feel that the cases which can be picked out are in the minority; that there are just as many, even more cases, in which no man can say beforehand that the blastomyces are present in the given case. I have seen such cases and that is why I have not laid such stress on these distinct clinical features as others do. Furthermore, I showed a case at the meeting of the American Dermatological Association which everyone who saw the case, acknowledged did not present the characteristic appearance regarding which so much has been said.

In regard to the importance of the case Dr. Hyde referred to in his first remarks, the reason why I did not lay as much stress on that as he did, was because of the fact that the blastomyces were discovered in it, and the importance of the case was worked out and realized so long after the observation of the case that it seemed to me to throw it into doubt.

The statement made before the Chicago Medical Society, that these eruptions contain seven different varieties of blastomyces has not been published; hence, it may be disputed; but there can be no disputing Dr. Rickett's statement, that he found three different varieties of blastomyces in Dr. Hyde's cases, because he has published an account of his findings in the *Illinois Medical Journal*, reference to which I have appended to my paper. He says: "From seven cases the organisms have been cultivated. They fall into three groups: 1. The yeast-like, resembling those of Hektoen, Hessler, Busse and Curtis. 2. The oidium-like. 3. The mould-fungus type, resembling the organism isolated by Ophüls and Moffit from the protozoic (?) disease." Study shows that all these have common generic properties, and are separated only by specific characteristics which are more or less variable. In accordance with pre-existing nomenclature, they all belong to the genus oidium. "Blastomyces" is considered not sufficiently inclusive.

A CASE OF ERYTHRODERMA SQUAMOSUM.

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A group of mild affections of the skin of a transitory nature, characterized by a desquamation of the epidermis, was called pityriasis by Bateman. Biett gave a more definite meaning to pityriasis, which he considered a mild chronic inflammatory process of the most superficial layers of the derma, accompanied with continuous exfoliation of small epidermic scales. Devergie gave an interesting description of pityriasis, which he called rubra, and we can say that he established a new pathological entity. Pityriasis rubra (Devergie), however, has nothing to do with another disease of squamous nature, which was after a while described by F. and H. Hebra under the name of pityriasis rubra. F. Hebra[1] said that the name pityriasis rubra could be given to any disease of the skin which during its whole course was not accompanied by any other symptoms but a constant, intense, brownish-red discoloration, without marked infiltration, without formation of papules, fissures, vesicles or discharging, with some itching sensations, seldom localized, but usually spread over the whole surface of the body. He referred to only 14 cases to his knowledge, showing it to be a rare disease, having usually a fatal termination. The patients are extremely sensitive to cold, complaining of continuous chills. The disease progresses without any interval, the skin is deeply red and is covered with thin scales. Gradually the skin becomes thin and shiny, showing a certain degree of sclerosis; the hair becomes dry and brittle, and falls off; the nails easily break, the whole process seems to be that of an inflammation of the chorion and of the epidermis, terminating in atrophy of the skin. The syndromic picture of the disease shows a very severe affection, while it is possible that cases of the same pityriasis may exist limited to some part of the body and of benignant nature. Vidal and Brocq have referred to cases of pityriasis of different degrees of intensity, from a very mild to those of a pernicious nature. In the dermatological practice the observation of eruptions consisting of red patches covered with thin epidermic scales not rarely occurs, and these eruptions are not accompanied by severe symptoms of malaise nor by deep affections of the general system. James C. White[2] referred to a case of this kind, which he called by the name of the author, Brocq's *erythrodermie pityriasique en placques disséminées.*

The name of *erythrodermies exfoliantes* was first applied to these eruptions by Besnier to characterize a group of affections the symptoms of which are a red surface (*erythros*, red) and a continuous desquamation. In his classic notes to the lessons of Kaposi this group of squamous affections of the skin is headed by the name *erythrodermies exfoliantes lentes ou chronique idiopathiques primitives.* These he divides into four varieties. One is a form of a chronic dermatitis with different ways of starting, which after a long chronic stay ends in a condition of the skin somewhat like that of the pityriasis rubra. Another type is a kind of dermatitis of a tardy and chronic course, accompanied with a leukemic condition, enlarged lymphatic glands, and also to the pre-mycotic stage, which although confused with eczematous forms, are yet neatly separated. A third

variety consists of a kind of dermatitis spread on the whole surface of the skin, red, with fine scaly epidermis, connected with latent infections, chronic suppurations, etc. The fourth variety, as sketched by Besnier, would be a kind of pityriasic condition of the skin, which remains as the result of pityriasis rubra follicularis.

It will be interesting now to refer to the history of the case, a boy, F. B., 3 years old, well developed, well nourished, with blond hair, white skin, blue iris. He is the youngest of seven children from healthy parents. The parents say that all their children have had the same affection in a milder degree between the ages of 4 and 8, relapsing in character, lasting from several weeks to several months. The little patient is already suffering for the third time from an attack of this kind, the first being when 2 years old, the second on Jan. 18, 1901, for which he was in the hospital four or five days, and the third relapse is the present, entering the Hospital on March 5. The patient has never suffered in general health; pulse and temperature have always been normal; he has never had sore throat or any other complaint. The skin of the entire body, with the exception of the palms of the hands and soles of the feet, is red and covered with scales, varying in size and appearance according to the different anatomical regions. Although the eruption is so universal, yet when the scales have been removed the red surface showed that they were made up of round patches of considerable size and by their confluence appeared the uniform redness. The redness disappeared somewhat when pressed under the finger, to return immediately. No papillary or follicular projection could be seen on the whole red surface, nor were the furrows of the epidermis altered. No subjective symptoms were present, the little patient never scratched, never complained of any pain. The redness was of a light rose-red hue, which was somewhat deeper in color when exposed to the cold air. The whole surface was covered with thin white scales of different appearance according to the different anatomical regions. On the forehead the scales were somewhat thicker and mixed with the cutaneous smegma and remained adherent with a tendency to form a whitish layer. (Fig. 1.) The hair is abundant, brown in color, in normal condition, but the scalp is covered with thick scales which, as in the forehead, have a tendency to accumulate. The neck was also covered with scales which were very thin in the anterior part and thicker and more abundant in the posterior. (Fig. 2.) The whole body was covered with scales covering red surfaces of the skin; they were much thicker and more abundant on the sides of the chest and abdomen, while the anterior surface of the neck, the sternal region, the middle of the abdomen, pubis and genito-crural regions were entirely free. (Fig. 3.) The shoulders and the back were just covered with scales, and in the same way the arms and the legs showed that they were deeply affected by the eruption. The hands had a few scales around the wrists, the phalanges were free from eruption and the palms and soles were perfectly normal. The nails did not show any alteration. The skin appeared rather rough, but taking it in folds did not show to the touch marked infiltration. Two applications of cod-liver oil on the body were sufficient in order to have all the scales detached, leaving the surface of the skin in the form of round red spots disseminated over the body. In these spots no papules or no follicular projections could be found, showing that the affection consist of a superficial process of the superficial layers of the derma and of the epidermis. That the disease is not the result of a permanent alteration of the general system is shown by the short period of the attacks, and by the easy yielding of the same to treatment. Furthermore, at the beginning and during the attack no fever, no itching, no stomach or bowel complaint ever caused any sufferings of the patient. The urine has been found constantly of a normal acid reaction and specific gravity, and normal in qualitative contents. The blood examination was made with the following result: red corpuscles, 5,400,000; white corpuscles, 8400; small lymphocytes, 23 per cent.; large lymphocytes, 2.1 per cent.; polynuclear, 73 per cent.; eosinophile, 1.4 per cent, showing that the blood is in normal condition. In different bullous affections we have found the eosinophile bodies increased to 19 per cent., and in one case of dermatitis herpetiformis (Duhring) at the time of an attack the eosinophiles reached 43 per cent.

The bowels were perfectly normal, the boy enjoyed a good appetite and perfect digestion. He never complained of any discomfort, was of a rather quiet and peaceful disposition. He slept soundly, never woke up at night, showing the mildness of the affection, which had not much influence on the general system.

This peculiar affection, which had already relapsed three times in the little patient, had nothing to do with any of the common diseases of the skin. It was not an eczema, nor an eczema seborrhoicum, it was not psoriasis nor a pityriasis rosea. Although somewhat like ichthyosis, yet it had nothing to do with that disease, which is a permanent skin affection. The erythema scarlatiniforme was soon eliminated, knowing that it is a disease with a cyclic evolution, accompanied with

Figure 1.

fever and inflammatory symptoms of the skin and mucous membranes. There remained for my case only one nosological place, which is between pityriasis simplex and pityriasis rubra (Devergie), a disease which has for its principal symptoms redness of the skin and exfoliation of the epidermis, a disease mild and relapsing in character, causing no general reaction and no subjective symptoms. It is therefore an affection which finds its place among the *erythrodermies exfoliantes lentes ou chroniques idiopathiques primitives*, as established by Besnier, with some affinity to the affection called by Brocq,[3] and accepted by James C. White as *erythrodermies pityriasique en plaques disséminées.* I said some affinity with the case of Brocq, for the reason that he described the disease as made up of spots varying in size from 2 to 6 centimeters, while in my case the

spots were larger and more confluent so as to form an equal surface. The age of the patient must surely have had a great influence upon the appearance of the disease, when we think that the patient of Brocq was a woman of 45, the patient of White a man of 38, and my patient a child of only 3 years, and it was only the third time the affection has made its appearance.

Pathology.—A piece of skin was removed from the deltoid region, and was treated in formalin 2 per cent., hardened in alcohol and the sections stained with hematoxilin (van Giesen), and polychrome methylene-blue by my assistant, Dr. M. L. Heidingsfeld.

In the specimens as it appears from the accompanying illustrations, Figs. 3 and 4, the horny layer is thicker and ragged with epidermic shreds, but the stratum spinosum and granulosum have a normal appearance. The stratum lucidum is fairly preserved, while it was lacking in the case of White. Although microscopically no papules and no alterations of the furrows of the skin were present, yet in some places the papillæ are somewhat enlarged, forming a kind of flat papillary elevation consisting of four or six papillæ. The blood vessels are greatly enlarged and can be seen in the papillæ and in the chorium. An infiltration of small cells is especially remarkable in the connective tissues of the papillæ and in the subpapillary layer. These infiltrating cells are found always more abundant around the blood vessels, which show a great increase in their perithelium. The glands and the hair follicles are enlarged and their epithelium is somewhat increased.

The entire pathological feature of the erythroderma consists in the enlargement of the blood vessels and in a perivascular cellular infiltration, which produces alteration of the nutrition at the epidermis and as a result the hardening and the exfoliation of the horny layer. These are signs of a well-marked inflammatory process revealed by the increase of the cells of the connective tissue of the papillary layer and around the blood vessels of the subpapillary layer. These cells are different from those which are found in the subepithelial layer in cases of lichen.

In erythroderma the patches of the skin are red, rough and scaly. Unna[4] points out two important characters which differentiate erythroderma from pityriasis rubra (Hebra) and pityriasis rubra seborrhoica, which consist in a mild cellular infiltration of the papillary layer and the marked adherence of the epidermic scales. Pityriasis rubra pilaris and ichthyosis are to be referred to hyperkeratoses, while erythroderma is only a parakeratosis spread to large surfaces of the body. In pityriasis rubra pilaris the enlargement of the pores of the skin is pronounced in form of papules of different size and elevation, while in erythroderma no apparent papules are to be seen nor enlargement of the furrows, but only a red flat surface covered with brown-like scaliness.

I do not find that our case has much similarity to the erythrodermie in the sense of v. Düring,[5] who describes it as presenting a general diffused redness and infiltration of the skin, which is developed in lichen neuroticus from the follicular papules and from interfollicular erythema, which disappears leaving a deep browning pigmentation. In our case no apparent papules nor enlargement of the pores can be seen, but pathologically we have found an increase of the papillæ with enlargement of the blood vessels and accompanying infiltration of small round cells in the papillary and subpapillary layer and a desquamation of the horny layer.

Differential Diagnosis.—Indeed, a physician who has not much practice with squamous affections of the skin, finding himself in the presence of a case like this subject of our study, where the surface of the body is all red and covered with scales, would find some difficulty in establishing a nosological place for the disease. As

Figure 2.

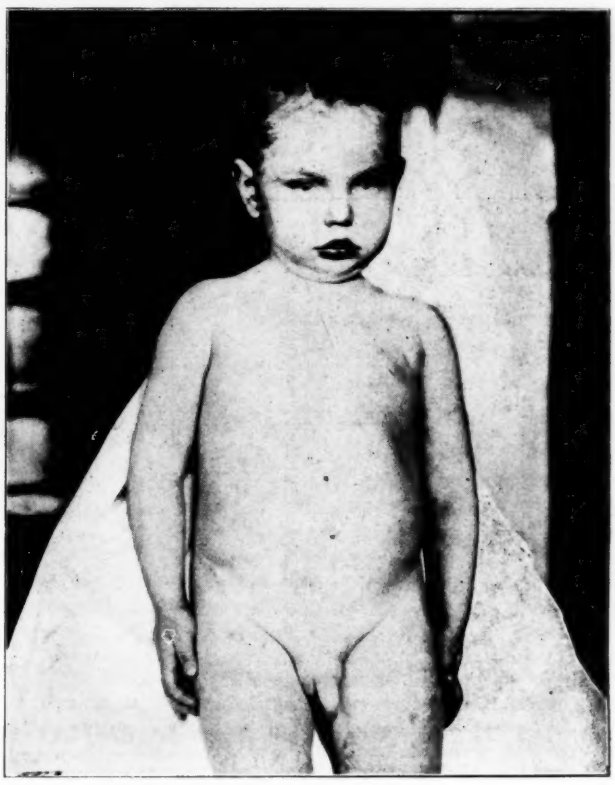

Figure 3.

stated above, this affection has no relation to the pityriasis rubra of Hebra, which from the beginning to the end is revealed by an intense redness of the skin with a thin desquamation of the epidermis. The redness is universal, the disease progresses constantly without intermission. The skin gets thinner, brilliant and retracted, ending in a sclerotic atrophy. In erythroderma the redness which appears equally diffused, consists of groups of eruption in red round patches, which have appeared clearly after removing the scales by means of annointing the skin with cod-liver oil. This clinical characteristic is perfectly in accordance with the pathological alterations where we have found places where groups of papillæ were somewhat enlarged and somewhat above the level of the others, as shown by our illustrations.

The difference between the two affections is therefore neatly marked by clinical and pathological characters. Erythema scarlatiniform, so well described by Besnier, and pointed out first by Ferreol under the name of desquamation scarlatiniforme recidivante, is an acute affection, accompanied with fever, general malaise, sore throat, with an eruption of red patches, itching and burning, which after four or five days begins to desquamate. This nosological type is entirely different from our erythroderma squamosum, where the scaliness on a red surface forms the principal characteristic of the disease, where no acute invasion, no subjective symptoms, no fever have ever appeared.

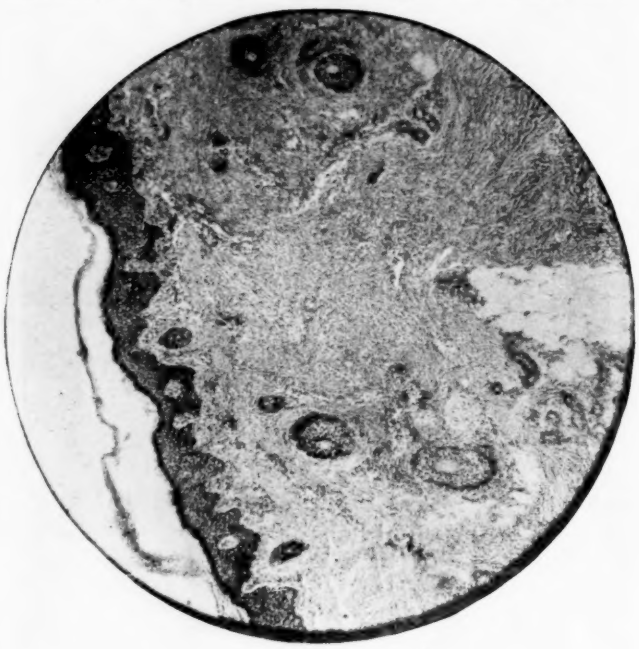

Figure 4.

Etiology.—The pathogenic causes of the erythroderma in general are extremely obscure and difficult to be established. In our case we can not find any apparent cause which externally may affect the skin directly, but we must rather admit a cause probably of a toxic origin formed in the system, which affecting the center of the vasomotor nerves is capable of producing hyperemia of the chorium with exudation and consequent alteration of the nutrition of the epidermis as revealed by the scaliness. From the statement of the parents that their other children between the ages of 4 and 8 years have suffered attacks somewhat similar to those affecting our little patient, we could infer that there must be some autotoxic condition in the whole family of an hereditary nature which is capable of producing those attacks. All that we can say is to resort to the explanation so well given by Tommasoli of the autochthonous poisonings which are formed within the system. In fact, an alteration of the physio-chemical condition of the fluids of the organism may easily happen. Ptomains are easily formed on account of retained toxic elements, which in some cases may favor the multiplication of microbes, and in other cases may produce disturbances of nervous and vasomotor nature, which make their appearance on the skin.

Treatment.—In regard to the treatment, the affection has easily yielded to our method, which has consisted in removing the scales by annointing the whole body with cod-liver oil and then wrapping the patient in a coarse woolen blanket. After two days the skin was perfectly free from the presence of the scales. Then an application of vaselin with resorcin and salicylic acid according to the following formula, has brought the skin to a normal condition.

R.	Resorcin	3ss	2 | 65
	Acid. salicyl.....	gr. x	
	Vaselin fl.	℥i	32 |

Figure 5.

Internally we have given a solution of potassium arsenitis (Fowler), from three to six drops three times a day.

From the results of the treatment it is clear that the affection is of a benignant nature, which does not produce severe symptoms, but it has the tendency to relapse, showing that the cause producing the affection has its seat in the system from autotoxic origin.

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The Physician at Watering Places.—At the recent German Congress of Balneology, Liebreich observed that it is the physician, more than the chemical factors, that make the success of a mineral spring resort. He ascribed to this fact the fine results attained in the German watering-places, which lead the world, he asserted.

Clinical Report.

HIP-JOINT AMPUTATION BY MEANS OF THE WYETH PINS.

EARL M. GILLIAM, M.D.,
COLUMBUS, OHIO.

The issue of May 19, 1901, of THE JOURNAL contains an interesting article by Professor Wyeth on "Bloodless Amputations at the Hip-Joint." The writer having had recently a case desires to report it as follows: C. H., aged 8, residing at Corning, Ohio, fell from a tree, a distance of 20 feet, sustaining a compound fracture of the upper third of the left femur. Oct. 27, 1900, three weeks after the accident, he was brought to St. Anthony's Hospital in a septic condition. Pulse was 140; temperature 104. The limb was much swollen and filled with pus. An incision was made on the outer aspect of the thigh and considerable pus liberated. The muscular structure was found to be disorganized, the bone comminuted, and the medullary canal filled with purulent matter. The bone was devoid of periosteum for more than five inches, and no evidence of bony union found.

His condition demanded immediate operation and it was decided to amputate at the hip-joint by the Wyeth method. After thorough preparation, the patient was brought to the operating-room the following morning and chloroform administered. Fifteen minutes previous to the giving of the anesthetic, morphia one-fourth grain and atropia one one-hundredth grain, were hypodermically injected. The limb was deprived of as much blood as possible by elevation, no bandage being used for fear of driving septic material into the circulation. Two long mattress pins were then introduced, and Esmarch's tourniquet applied. No trouble was experienced during the operation until disarticulation was commenced. Owing to the shortness of the shaft of the femur rotation was exceedingly difficult.

After the ligation of the vessels the tourniquet was removed and but little oozing occurred. This was effectually controlled by hot moist compresses. A drain was placed at the acetabulum and brought out at the most dependent part of the stump. Muscle was coaptated to muscle, and the skin flaps approximated by catgut. Retention sutures of silkworm gut were also inserted. But little shock ensued and convalescence was rapid.

Another case in which the writer made use of the mattress pin was one of amputation at the shoulder joint. Miss S., aged 18, residing at Delaware, Ohio, was brought to St. Anthony's Hospital, April 29, 1897, suffering from gangrene of the left hand and forearm. Two weeks previous to her admission to the hospital the parts were caught in a steam-laundry roller and badly mangled.

Disarticulation at the shoulder-joint was performed April 30, the pins being used with complete satisfaction. No blood was lost until the last stage of the operation was reached. The principal vessels having been ligated, the tourniquet was removed and the flaps partly brought together, when suddenly a most violent capillary hemorrhage occurred.

Much difficulty was encountered in arresting this, but by means of continuous pressure it was finally controlled. Notwithstanding the great loss of blood, the patient evinced no shock and convalesced nicely. It was afterwards learned that she was one of the so-called bleeders.

New Instrument.

SPRAYING AND INSUFFLATING THE ACCESSORY NASAL CAVITIES.

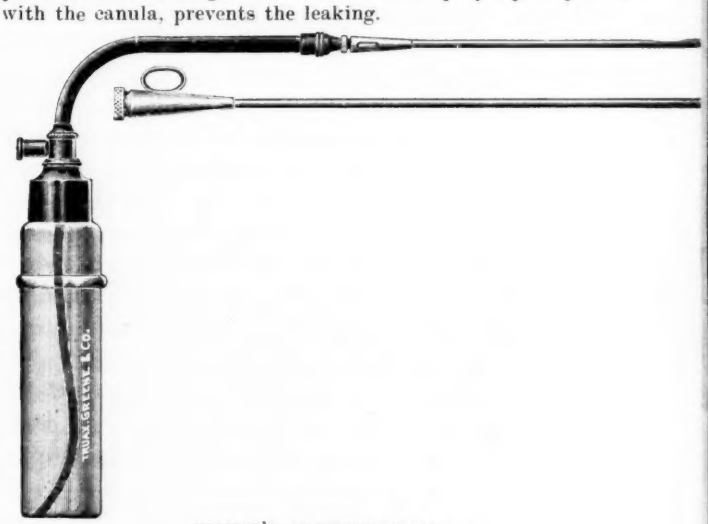
S. S. BISHOP M.D.
CHICAGO.

In suppuration of the cavities connecting with the nose the question of effectively cleansing and medicating them is a serious one. The ordinary nasal douche and sprays are inefficient. It is necessary that generous quantities of detergent solutions shall not only reach the affected parts, but that they shall flow over them with sufficient force to dislodge and carry away the offensive discharges.

The writer has devised a combination of canula and spray tips, shown in the accompanying illustration, which render satisfactory service. They are an adaptation of the Davidson atomizer fitted with spray tips having very large openings, and the outer tip being turned to fit closely into the conical opening of a special canula. The latter is made of silver, and is practically a modification of the Eustachian catheter. Instead of having the beak curved on the arc of a large circle, like that of the catheter, it is bent on the arc of a very small circle, so as to allow of its introduction into a narrow space.

This arrangement of the beak is required for the purpose of introducing it into the maxillary antrum, either through the ostium maxillare, or through an artificial perforation, for instance the opening made by way of the socket of a tooth.

The outer spray tip is so nicely adjusted to the conical mouth of the canula that there is no leaking at their junction, although the first ones made were defective in this respect; but a small piece of rubber tubing fitted over the outer spray tip, to join it with the canula, prevents the leaking.



BISHOP'S ANTRUM SPRAY.

When fluids are thrown through the canula they escape from its beak in the form of a very profuse spray, which approaches the character of a stream in effect. It is so copious, in fact, that it deluges the cavity into which it is projected, and with an air-pressure of only eight pounds the full bottle of the detergent solution is emptied within a minute. The same tips, used without the canula, are valuable for flushing the nasal fossæ.

By means of this antrum spray, some cases of suppuration of the antrum of Highmore can be cured without making an artificial opening, but the apparatus is just as effective for washing out the antrum after an operation. By rotating the beak of the canula, introduced through the artificial opening, the walls of the cavity can be thoroughly cleansed and medicated, as I have demonstrated many times.

If the canula is to be used in the ostium maxillare, the opening of the antrum is first located, the canula is introduced, and the latter is then marked at the point corresponding to the tip of the nose. This mark, in any given case, facilitates the introduction of the canula afterwards.

The same apparatus is useful in treating suppurative inflammation of the ethmoid cells, the beak of the canula being directed upwards so as to throw the coarse spray into the cells. Some patients with disease of the frontal sinuses have claimed that they could feel the spray from the canula enter the sinuses. I have not felt certain, however, that they were not mistaken.

After cleansing the suppurating surfaces, various powders, such as boric acid, aristol and nosophen, are blown through the canula to the diseased parts. When used as an attachment to the powder-blower the canula must be dry, hence it is advisable to have more than one for use in the combined wet and dry treatments.

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HOSPITAL MANAGEMENT.

It seems that in England a disagreement between the managers and the medical staff at the National Hospital for the Paralyzed and Epileptic[1] has resulted in a free, general discussion of the question of hospital management, with particular reference to the relations between the lay managers and the medical staff. The *Practitioner* devotes its number for June to a "symposium" on the subject, the opinions of a considerable number of representative persons interested in hospitals in one capacity or another having been secured. The vital question is whether hospitals should be wholly under lay management or whether the medical staff should not also have a voice in the government. Mr. Burford-Rawlings[2] set up the claim that the medical element should be entirely excluded from any part in hospital government. The reasons advanced by the gentleman in support of this view can not be considered as reflecting much credit upon his conception of the true mission of the hospital and the relations of medical men to its work. At all events, his contentions would not find many supporters among interested persons conversant with hospital matters in general in this country. The symposium in the *Practitioner* may be summarized as an absolute and sweeping condemnation of the Burford-Rawlings theory of hospital management. Among others, Prof. Clifford Allbutt takes a decided stand against the so-called "lay supremacy" in hospitals, and comments upon the condescending attitude seen in some managers toward the physicians, an attitude which we in this country observe more particularly in the politician, who for a brief period finds himself "interested" in the management of the county or city hospital. The opinions collected by the *Practitioner* are strongly in favor of adequate medical representation on the governing bodies of hospitals. It is quite evident that the highest degree of success, in the broadest sense, will be attained in hospital work only when the fullest sympathy and harmony obtain between the managers of the financial and other matters and the men entrusted with the actual care of the patients. The exact manner in which this sympathy is attained does not matter so much, provided there is opportunity for it to grow and develop. A hospital in which there is lack of real co-operation between the managers and the medical staff is like a house divided against itself. There are so many elements essential to success in hospital work of which the lay managers can have no idea, that they should be happy to turn over certain things entirely to the medical men, and there are other questions of diverse kinds which the medical man is not so well fitted to handle as the man of affairs. The influence of medical men is especially needed in order to overcome the idea, often prevalent among laymen, that admirable buildings, well-prepared food, smart nurses, and the requisite number of patients constitute the essentials for a successful hospital. These things are well enough; but the one thing needful to bring out of them the greatest service is encouragement of the scientific spirit in the medical staff.

1. See our "London Letter."
2. Nineteenth Century, April.

NERVOUS TACHYPNEA.

The act of respiration may be modified by a variety of influences; thus, it is lessened in frequency by opium and its derivatives, rendered irregular by uremic poisoning, and increased in frequency by all states attended with deficient hematosis. The last-named condition is known as dyspnea. When the demands on the respiratory function are lessened by reason of an over-supply of oxygen, apnea results. Mere increased frequency of respiration, occurring in paroxysms, or constantly with paroxysmal exacerbations, but unassociated with organic disease, is known as tachypnea, and it is not an uncommon manifestation of neurotic disorders, particularly hysteria and neurasthenia. An analysis of forty cases of this character, observed among a total of 1155 cases of various neuroses, has been made by Dr. Reckzeh.[1]

The term tachypnea was restricted to cases in which the respiratory frequency was forty or more in the minute, and all cases were excluded in which the condition was not purely neurotic and functional, but dependent on organic disease. Fourteen of the cases occurred in males, and 26 in females. In the former, the accompanying nervous disorder was either neurasthenia or traumatic neurosis; in the latter, hysteria, with the exception of 2 cases of exophthalmic goiter and 2 of profound neurosis. The men were from 18 to 44 years of age—with an average of 26.54; the women, from 15 to 52—with an average of 23.12.

With regard to etiology, heredity was found to play an important part, seven cases exhibiting hereditary predisposition, sometimes direct, at other times indirect. In other cases, the resistance of the nervous system had been lowered by somatic or psychic influences, such as alcoholism, traumatism with concussion, mental depression, anger, fright, functional disorders of the heart, gastro-intestinal disorders, diseases of the sexual organs, sexual excesses and abuses.

Respiration was moderately accelerated and superficial continually in 19 cases, with slight paroxysmal tachypnea in 11 of these, and severe in 8. In 5 other cases there was marked tachypnea continually, with

1. Berl. Klin. Wochenschrift, 1901, Nos. 17, 18 and 19.

paroxysmal exacerbations; and in 16 there occurred attacks of tachypnea, mild in 8, and severe in 8, the breathing at other times being normal. The respiratory rhythm was unaffected in so far as expiration followed inspiration without a pause, although the relation of the first to the second was as 1 to 1, instead of 7 to 6. The onset of the attacks of tachypnea was always sudden, while their subsidence was more or less gradual. The type of respiration was generally costal; the vital capacity of the lungs was usually low.

No satisfactory explanation has been given for the occurrence of the attacks of tachypnea. It is thought, however, that the condition may be dependent on irritation of the vagus, resulting from psychic or other central or peripheral influences. This takes place in health, but under the circumstances in question it is more readily brought about.

The diagnosis of nervous tachypnea depends upon the exclusion of disease of organic character capable of causing increased frequency of respiration, and the presence of other neurasthenic or hysteric symptoms. The prognosis of the condition itself is good, although influenced by that of the underlying disorder.

The treatment is in part symptomatic, with such remedies as morphin, bromids, sulphonal, antipyretics, cardiants, and ice; and partly causal, directed to the relief of the neurasthenia or hysteria, with valerian, hydrotherapy, electricity, etc.

YELLOW FEVER AND MOSQUITOES.

For that final proof by experimentation of the cause of disease and its *modus operandi*, or for the collection of irrefutable evidence of pathogenesis, extensive use of animals has been necessary. The environment and other conditions upon which the proof depends of questions subjected to investigation may be absolutely controlled in this manner and accuracy of detail obtained to such a degree that the accumulated data assume the exactness of a mathematical proposition. Nevertheless, for some diseases and for certain problems the difficulties have precluded the use of animals and public sentiment has prevented the employment of human beings; this has been especially true of researches upon some of the infectious diseases.

Reed and Carroll, and the corps of assistants under them, in their investigations of yellow fever, have boldly waived all precedents of this character and have made use of human beings in experimentation with a success, in some respects, hitherto unparalleled. Without entering into the humanitarian phase of this procedure, except to note that in all instances the individuals experimented upon were "fully informed as to the nature of the experiment and its probable results," it is of interest to learn that the importance of the conclusions accruing from such courageous researches are in thorough accord with the novelty of the methods employed. The experiments in which human beings have been utilized and controlled in manners fully as precise as those of any animal experiments, have had as their product up to the present time, two conclusions; the rejection of the bacillus icteroides of Sanarelli as the cause of yellow fever, and proof of a connection between this disease and mosquito bites.

In an interesting summary of the work of this board,[1] Surgeon-General Sternberg reviews the familiar facts pertaining to the geographic and climatic prevalence of yellow fever with regard to its transmission by mosquitoes.

The failure of the experiments of Carlos Finlay, who first suggested this transmission, have been found to depend upon the length of time necessary for the "germ of yellow fever to develop in the bodies of the mosquitoes after they have bitten individuals afflicted with the disease. From this fact the thought at once intrudes that the parasite of yellow fever may be of a protozoan nature and allied to the organisms of malaria. In May of this year, Dr. Reed reported that yellow fever had been successfully conveyed to twelve human beings by mosquito bites. Some support to the mosquito transmission has been furnished by the inability to transmit the disease by experiments with clothing and bedding contaminated with vomites, excreta, etc., of the fever stricken; this has had as its corollary, that fumigation for prophylaxis is only of value as an insecticidal measure, and instructions to this end have been incorporated in a circular issued by the Chief Surgeon and Commanding General of the Department of Cuba, upon the approval of Surgeon-General Sternberg. It might be as well to direct investigation to the discovery of curative or abortive methods of treatment, as to the detection of the specific organism, for in some infectious diseases such treatment has long been highly useful, notwithstanding ignorance of the germs, e. g., hydrophobia and smallpox; moreover, the organism of yellow fever may, as hinted by Sternberg, be ultra-microscopic; it should be remembered[2] that Nocard and Roux, in their work upon pleuro-pneumonia of cattle, found an organism that was barely visible with a magnification of 2000 diameters. Finally, it is to be hoped, that by the use of collodion capsules, or some other equally ingenious technic, animals may be made susceptible to inoculation experiments and the use of human beings relinquished.

THE IDENTITY OF VACCINIA, COWPOX AND SMALLPOX.

It was the belief of Jenner that vaccinia, cowpox, and smallpox were expressions of the same disease; but this view has been warmly contested, and one of the early objections against the utility of vaccination consisted in the argument that one could not hope to confer protection from one disease by inoculation of another. This

1. Yellow Fever and Mosquitoes. The Popular Science Monthly, 1901, July.
2. JOURNAL A. M. A., xxxiii, p. 1117.

contention seemed supported by the difficulty encountered in transmitting smallpox from man to cow. Nevertheless, this has been accomplished in a number of instances. The inference seems justified, therefore, that by reason of certain biologic peculiarities, the cow is capable either of resisting entirely infection with the virus of smallpox, or of so modifying the latter that an attenuated form of the disease develops; and it may be concluded that the disease appeared the earlier in man, and from him was conveyed to the cow. The comparatively mild character of the disease when human beings were inoculated with smallpox for protective purposes seems not entirely without significance in this connection.

Believing it not improbable that much of the cowpox in the prevaccination period was derived from the inoculated form of smallpox, rather than the ordinary variety, Dr. S. Monckton Copeman,[1] one of the ablest and most ardent of contemporaneous investigators in the subject, undertook to obtain for purposes of experiment virus from Nubia and certain parts of India where inoculation of smallpox is still practiced; but without success. However, he found that the monkey is susceptible to smallpox, the various phases of which in this animal closely resemble those observed in man; and accordingly he inoculated some monkeys, and from them successfully conveyed the infection to calves, with the development of lesions indistinguishable from those of typical vaccinia, although calves could not be infected with virus directly from human beings. Further, he was able to vaccinate successfully children with lymph from the inoculated calves, without any generalization of the eruption or the development of any bad symptoms. It would thus appear that it is necessary for some change to take place, either in the virus of smallpox or in the condition of the calf before inoculation of the latter by the former can be effected. The observation, further, lends support to the view that smallpox, cowpox, and vaccinia represent varying grades of intensity of the same infective process.

1. British Medical Journal, May 11, 1901, p. 1134.

VITALITY AND CHEMISM.

In the issue of *Science*, June 15, the late Dr. Joseph Le Conte notices the fact that seeds exposed to intense cold (—180 to —250 F.) do not lose their power of germinating, and suggests that as chemical action is arrested at such temperature, life may be a form of energy akin to chemism. He, therefore, attributes life to a particular molecular arrangement, the extreme cold acting by temporarily changing this molecular constitution. This may do for a hypothesis, but it will require some at present apparently impossible research for its verification. His admission that life is a form of energy seems hardly warrantable with our present knowledge; it certainly does not come under any law of the correlation of forces; it is not convertible into any other form of energy. Le Conte says: "The essential nature of life, as of all energy, is activity; but there is a necessary underlying condition, i. e., a peculiar molecular constitution, which may be called potential life." It seems much more natural and reasonable to recognize in vitality a still more ultimate agency than chemism, which seems itself to act under the guidance of this vital principle, as it may more properly be designated, rather than a force or form of energy, and to admit its as yet mysterious and unexplainable nature. To claim that, because chemism also survives extreme exposure to cold, life must itself be an analogous force, appears to us a begging of the question. The possibilities of the vitalized cell do not appear to us explicable by any known law of physics or chemistry as yet discovered.

A PROOFREADER'S BLUNDER.

Josh Billings said that the difference between a blunder and a mistake is that, when one takes another's umbrella and finds that it a better one than his own, "that's a mistake," but when the umbrella is poorer, "then it's a blunder." Probably the other fellow would not agree with him. Whether to call the error in proofreading which occurred in this journal last week a blunder or a mistake we are not decided. As there was no harm done by it and as it probably caused a good many smiles, we are inclined to call it a blunder. The title of the leading article as it appeared in the table of contents read: "Poverty and Pregnancy, their Cause, Prevention and Cure," and as the author, whose name followed, is one of the oldest, best known and most respected members of the profession, there was probably a good deal of curiosity manifested on the part of some to know what ultra-Malthusian ideas would be found in the article. While "poverty and pregnancy" are quite likely to be found together, the two could hardly be considered together in regard to their cause, prevention and cure. As a rule typographical errors are explainable, but it is hard to explain how the word "pregnancy" could be mistaken for "degeneracy"; we shall not try, but simply call it one of the blunders of the Fourth of July. As misery loves company, there is a certain amount of pleasure in reading in the current number of our staid and respected contemporary, the London *Lancet*, an apology for using the words "a sour correspondent," which it insists should have been "as our correspondent."

THE COMMITMENT OF THE INSANE.

The newspapers have recently devoted some of their news and editorial space to a case in which an alleged lunatic was liberated by an Indiana court decision as not insane, and have dilated upon the occurrence as a proof that under existing laws sane persons are liable to be committed to the "living death" of asylum existence. There is nothing that more quickly stirs up the public than such a charge, and there has been an evident tendency to make the most of it. Without regard to the merits of the particular case or to the peculiarities of Indiana laws, it may safely be said that the danger of sane persons being long confined in public asylums is a minimal one. It seems to us also that the presumption is all in favor of the insanity of a person detained in an asylum under presumably competent and honest medical officers, however the courts may decide. Dangerous lunatics have been released by judges and juries

as not insane and the same individuals have been recommitted by judicial procedure almost immediately as a measure of public safety. In other cases suicides, murders and other dangerous acts have quickly followed their release. In fact there is nothing less infallible than judicial decisions as regards insanity, that is, as regards its existence or non-existence in individual cases. In states where a judicial proceeding is required for commitment it is possible for perfectly sane persons to be found insane, and vice versa. The predilections, however, of courts and juries rarely permit the first error, while the latter one is probably frequent enough. There is a very serious possible danger of the enlargement of unsuitable cases in any popular agitation in regard to the supposed confinement of sane persons, and judges and juries should realize their responsibility and make sure by fully competent testimony as to the fitness for absolute liberty of anyone they order released.

TYPHOID FEVER AND DIPHTHERIA.

As pointed out by Manges,[1] the development of diphtheria in the course of typhoid fever is probably often overlooked, principally on account of the stupid condition of the patient and because the physician does not often feel called upon to make thorough examinations of the throats of his typhoid fever patients. The older literature on typhoid fever contains frequent reference to pharyngeal and laryngeal complications of a diphtheric character, at least in the anatomical sense. While so thorough a writer as Curschmann, in 1898, practically denied the occurrence of true diphtheria in typhoid fever, several instances of this kind have been recorded both before as well as after Curschmann's expression of his views, more particularly by American writers, the diagnosis being fully verified by bacteriologic and cultural tests. Manges reviews these cases, adding six of his own in which the diagnosis of diphtheria was corroborated by cultural methods. Curschmann's statement is consequently incorrect. It is of importance that the possibility of true diphtheria developing in the course of typhoid be generally recognized, both for prophylactic and therapeutic reasons. Diphtheria antitoxin is borne as well by typhoid fever as by other patients, and it should be promptly administered, when necessary, in typhoid fever, so as to remove as thoroughly as possible the added danger of diphtheria, which does not seem to have any special influence one way or the other upon the clinical course of the typhoid fever itself. In many of the cases of mixed infection, especially the earlier ones, death resulted; in some instances the existence of diphtheria was not recognized until at the postmortem.

1. American Medicine, June 1, 1901.

THE ETIOLOGY OF NOMA.

The etiology of noma has been made the subject of frequent inquiry in recent years, but the results have been otherwise than uniform. This is probably unavoidable on account of the large numbers of various kinds of organisms necessarily freely present in areas so exposed as those usually attacked by noma. It is true, however, that in several instances of noma competent investigators have demonstrated the presence of diphtheria bacilli. Beginning with Bishop and Ryan, in 1895, who described a pseudodiphtheria bacillus, or a true diphtheria bacillus of greatly reduced virulence, Freymuth and Petruschky, in 1898, found diphtheria bacilli associated with two cases of noma, one of the genitalia and one of the alveolar process. Both of these cases were cured by the use of diphtheria antitoxin. And now comes Walsh[1] with a report of eight cases of noma, in all of which he found B. diphtheriæ, as determined by the usual tests now in vogue. Most of these cases had measles, the disease which most frequently is succeeded by noma. Walsh points out that diphtheria is often seen with and after measles. In the St. Vincent's Hospital, from which his cases are taken, diphtheria and noma are also not infrequently associated. Walsh concludes that true diphtheria bacilli are found in many cases of noma, and that as noma is a form of gangrene it is not unreasonable that the diphtheria bacillus is the primary cause, at least in some cases, the putrefactive softening resulting from the growth of saprophytes. He thinks that when other pathogenic microbes, capable of causing necrosis, are found, then it may be that they are the primary excitants. A larger number of cases must be studied before the unity or multiplicity of the etiologic factor in noma may be definitely settled. The views of Walsh seem to harmonize well with the results of the bacteriologic observations so far, and if we grant that the bacillus of diphtheria is the cause of at least some cases of this destructive disease it at once follows that diphtheria antitoxin should be freely used in all cases of this kind, with a view to arresting the necrosis at as early a stage as possible in those instances started by the diphtheria bacillus.

THE MODE OF INFECTION IN ANCHYLOSTOMIASIS.

Anchylostomiasis is caused by a parasitic worm, the uncinaria duodenalis or anchylostomum duodenale, which inhabits the upper part of the intestine and produces, by removal of blood and possibly by intoxication, an anemic disease of extraordinary frequency in some parts of the world, especially Egypt, Italy, India, and also elsewhere. This disease is known also as Egyptian chlorosis, brickmaker's anemia, mountain anemia, miner's cachexia, etc. In the United States we are apparently free from the infection; at all events no observations have been made upon the disease in this country, except possibly in some of the southern states. The diagnosis is made by finding the eggs in the stools of persons with chronic anemia and wasting as well as more or less well-marked intestinal disorders. The mode of infection is supposed to occur through the drinking water, because the larvæ develop in moist earth, whence they may readily enter the sources of water-supply. In Egypt the disease is very common in those that work in damp soil, and, as indicated by the synonyms mentioned a moment ago, workers in the earth seem subject to the infection. Recently, Looss, of Cairo, has suggested another mode of entrance, namely through the skin. He found that when suspensions of larvæ are allowed to dry upon the skin there

1. Proceedings Phil. Pathological Society, 1901, iv, 179-186.

quickly results an area of redness and burning. The intestinal infection developed in his own case under circumstances that, he states, absolutely exclude entrance by the mouth, and while he was working with the larvæ. The fact that the larvæ sink to the bottom in reservoirs of water does not seem to him to favor the mode of entrance ordinarily accepted. Looss placed a drop of larval suspension upon the skin of an extremity an hour before amputation and carefully examined the area afterward. It was found that the larvæ penetrate freely into the hair follicles; this accounts satisfactorily for their rapid disappearance from the surface of the skin. He promises future reports on further work on this interesting observation. If found to be true, this ability of the larvæ to enter the skin will account for the infection perhaps even more satisfactorily than the explanation heretofore offered; especially in the case of laborers who stand for hours in soft mud. But the course of the larvæ toward the jejunum and the reasons that determine their wandering and their localization here offer many interesting problems for research. Perhaps a similar explanation is applicable to other parasitic invasions not now fully understood.

THE PERSISTENCY OF PLAGUE.

An editorial in the *Journal of Tropical Medicine*[1] summarizes the present status of the plague in terms that are not altogether encouraging. Hong Kong is now passing through the seventh recrudescence, one that promises to be the worst yet experienced. Modern sanitation seems there to have met its match. In spite of specially favorable conditions this British outpost appears to be as vulnerable as any of the adjacent insanitary Chinese towns and villages. "From what is known of plague," the editorial states, "we must expect when once a town is infected, that recurrences are not only possible but that they will continue with an inveterate persistency, rendering the future, from a public health and commercial point of view, gloomy in the extreme." The plague in Capetown is also instanced as affording unpleasant facts. We have come to believe that Asiatics were especially susceptible to the disease and that the white race, with its better modes of living and more sanitary habits, would be almost immune. In Capetown, however, the whites suffer fully as much as the colored races, and it is the Chinese there who are comparatively least affected, and next to them the Malays. Habits no more than race appear there to govern the spread of the infection, and sanitation has thus far done little effective work in checking it. From these and like facts it seems there is little ground for any complacent sitting down and waiting, with the belief that any section is safe. We evidently do not know yet all the resources and methods of the destroyer, and any false sense of security where the pest has apparently disappeared may have most disastrous consequences. It has reappeared in Honolulu notwithstanding the very energetic measures taken against it, and may do so elsewhere where the measures have not only not been so thorough, but have been embarrassed by an ostrich policy of suppression of facts. These are possibilities to be seriously considered, and only eternal vigilance can be regarded in any exposed section as the least price of security.

1. June 15.

AN ENCOURAGING OUTLOOK IN MEDICAL LEGISLATION.

Medical practice acts are gradually "going through the mills" of the supreme courts, and are generally coming out all right. One of the most recent decisions is that of the Ohio supreme court refusing a mandamus to compel the State Board of Medical Registration to recognize the diplomas of the Hygiea Medical College, of Cincinnati. The court rejected the plea that the grant of the power to determine what medical colleges were in good standing was unconstitutional, since that point had already been decided by another decision. If it were void on this ground, moreover, it would be highly improper for the court to compel the board to exercise it as regards this particular institution. The charge of prejudice does not appear to be sufficient ground for mandamus in this case. The proper scope, the decision says, of a mandamus, against an official board, is to command the performance of acts which the law has specially enjoined upon it as a duty resulting from the office. Unless the duty is so enjoined the remedy is inappropriate. Search of the statutes reveals no provision authorizing the application of a medical institution to be recognized as in good standing or compelling the board to act on it. It is only when a diploma is presented that the action of the board can be invoked. Whether, then, a mandamus would lie on the refusal of the board to grant a certificate, must depend on the facts of each case. Such cases can not be covered by a general order to grant certificates to the graduates of any particular institution, for unless an application is made the duty of the board to grant does not arise. And then the seeking the remedy for a refusal belongs to the applicant as the party directly interested, and not to the college issuing the diploma, whose interest is only remotely affected. The statute does not define what shall constitute a medical institution in good standing; that is left to the judgment of the board. It is unnecessary to inquire here whether there may be cases where the courts would undertake to correct or control its judgment. It is clear that the standing of a medical college within the meaning of the statute is not to be determined alone from the course it has prescribed for graduation. The statute imports, at least, that it shall be one that has established a favorable reputation in the medical profession. The board should not be required to recognize one that, from its brief existence or the novelty of its teaching, in its judgment has not acquired such reputation, and much is necessarily left in this respect to the sound discretion of its members, who, it is assumed, will act as their position requires, fairly and justly to all concerned. This decision, of which the above are the leading points, is a valuable one to our Ohio confrères, as establishing the validity of the law, and also affords a useful precedent for reference in other communities.

THE FRENCH GOVERNMENT sends every year some young men, natives of Madagascar, to Paris for a two-year course in medicine, after which they return home to practice.

Medical News.

COLORADO.

Dr. **Charles Denison,** Denver, sails for Europe on the *Campania,* July 13, to attend the British Congress of Tuberculosis.

New Medical Law.—The effect of the new medical law is being felt. On June 16, a "doctor of psychology" was fined $50 and costs for practicing medicine without a license.

The National Hospital for Consumptives, Denver, has received donations of $25,000 from W. Guckenheim's Sons, of New York, and $5000 from S. Grabfelder, of Louisville, to be applied to the building fund.

Tuberculosis in Colorado.—Dr. Henry Sewall, Denver, in a report made to the state medical society, stated that in the sixteen months to May 1, 1901, 1674 deaths from tuberculosis were reported. In 970 cases the disease originated outside of Colorado. In 480 cases, the origin was not given. In 224 cases or 13.32 per cent. the disease originated in Colorado.

The Colorado Maternity and Children's Hospitals, Denver, were opened to inspection a short time ago. The staff of the new institution is as follows: Consultants, maternity staff, Drs. Thomas H. Hawkins, Francis H. McNaught, William P. Munn, William S. Bagot and Charles B. Van Sant; children's staff, Drs. Herbert B. Whitney, Seymour D. Van Meter, Eleanor M. Lawney, Melville Black, N. Harris Kirby and Frank E. Waxham. Visiting Staff, maternity, Drs. Frank W. Kenney, Seymour D. Van Meter and Laura L. Liebhardt; children's, Drs. Frank W. Kenney, F. P. Gengenbach and C. A. Graham.

ILLINOIS.

Dr. **E. M. Sutton,** Peoria, will spend his vacation in Europe. He will go on the *Umbria,* leaving New York on the 20th.

Dr. **Arthur L. Hagler** has been appointed on the staff of the St. John's Hospital, Springfield, in the eye and ear department.

Dr. **Frederick C. Winslow,** has assumed charge of the Asylum for the Incurable Insane at South Bartonville, near Peoria.

Physician Not Horse Doctor.—Judge W. G. Cochran has decided that a surgeon has not the right to practice as a veterinary in a suit brought by Dr. Max W. Barbour, of Arcola, against a race-horse owner for services rendered to one of his horses.

Chicago,

Dr. **A. M. Corwin** has resigned from the faculty of Rush Medical College.

Dr. **Henry H. Mather,** while playing golf, sustained a fracture of the right fibula.

Dr. **Arthur Reynolds** sails from New York, on July 13, for London, to attend the Congress on Tuberculosis.

Dr. **Willis O. Nance** will leave New York on Saturday, July 20, on the *Umbria,* for a six weeks' European trip.

Drs. **Frank Billings and Robert H. Harvey** leave this week to spend their vacation at Mackinac Island, Mich.

Travelers.—Drs. J. A. Robison and W. Byron Coakley have joined the army of European travelers and will attend the Tuberculosis Congress in London.

Dr. **L. Blake Baldwin,** who has been appointed professor of clinical dermatology in the College of Physicians and Surgeons, left July 1, for Paris, where he will spend three months.

The Chicago Lying-In Hospital has received a donation of $5000 from Abram Slimmer, Waverly, Iowa, for the erection of a new dispensary building, contingent on the subscription of $10,000 additional.

The College of Physicians and Surgeons has been formally deeded the West Division High School property, by the City of Chicago, the consideration being $186,000. About $40,000 will be expended on the building belonging to the college recently burned.

Northwestern University Medical School.—N. S. Davis, Jr., has been elected dean, and Arthur R. Edwards, secretary, of the faculty. Wesley Hospital, in close connection with the college, has been informally opened to the profession, and after complete equipment the formal opening will take place. The Hospital will accommodate 300 patients. Plans are completed and the money is raised for a $22,000 amphitheater and operating rooms at Mercy Hospital, with a seating capacity of 400. Drs. C. L. Mix and P. T. Burns have been appointed assistant professors of anatomy.

Changes in Medical Department of the National Guard.—The resignations of Major G. Frank Lydston, surgeon, and Lieutenant Elihu N. Elliott, assistant surgeon, assigned to Second Infantry, and of Lieutenant Norval H. Pierce, passed assistant surgeon, first ship's crew, Naval Militia, have been accepted. Dr. Buell S. Rogers has been commissioned major and surgeon, Dr. B. McPherson Linwell, captain and assistant surgeon, and Drs. Frank Webster Jay and F. Gregory Connell have been commissioned first lieutenants and assistant surgeons, and assigned to the Second Infantry.

Mortality and Morbidity.—Notwithstanding the high temperature of the past fortnight the mortality rate has not been materially increased. There were but 17 more deaths last week—and of these 7 were from sunstroke—than during the previous week, while the total was 20 fewer than in the corresponding week of 1900. Only the continued malignant character of the widespread epidemic of measles gives the Department any concern. There were 13 deaths recorded from this disease last week and the type of the malady shows no change. The Department repeats its warning to parents against exposing non-immune children to the contagion and again insists upon the necessity of strict isolation of all measles patients. The disease is especially prevalent and severe in the 27th Ward.

Increase of Suicides.—The recent enormous increase of suicides in this city has led the Commissioner of Health to request the Coroner to make special inquiry into the history of these cases with reference to the relation of influenza. In the following note to that official it is pointed out that "In the five years, 1871-1875, the suicides in Chicago were 12.6 per 100,000 of population. In the last lustrum, 1896-1900, there were 23.0 per 100,000. The increase—which has been quite general in all civilized countries during the past half-century—was very gradual in Chicago until about 1893, when they suddenly increased from 18.7 in 1890 to 23.8 per 100,000. Grip or influenza has been more or less prevalent in this city since the fall of 1889 and was especially prevalent in 1891. It is claimed that this disease profoundly affects the nervous system, causing all grades of mental disturbances, from simple melancholia to acute insanity. It is quite possible that the great increase in the number of suicides in 1893 was due to this effect of the grip epidemic of 1891 and that the general increase during the whole period, 1890-1900 is due to the same disease. What I wish you would do for me is to cause inquiry to be made in every case whether the suicide had ever had an attack of grip or influenza; if so, in what year; and had the fact ever been the subject of comment by the suicide or the family or associates. Please have these data noted on the Coroner's certificate so that I may have them properly compiled."

No Private Hospitals in Chicago.—The London *Lancet,* June 22, prints the following paragraph from its New York correspondent: "Novel Sanatorium in Chicago.—A sanatorium is about to be constructed in Chicago upon a wholly new principle. The medical men in that go-ahead city have for some time been dissatisfied with the means of accommodation which Chicago offers to patients from a distance who are desirous of placing themselves under the charge of practitioners there. There are many objections both on the part of physicians and patients to the large general hospitals and it seems that there are no private hospitals in Chicago. In consequence of this condition of affairs those who wish to be treated in the city are compelled to betake themselves to large hotels or to apartments. The big hotels are too noisy and apartments have, as a rule, some drawbacks. Besides, friends or relatives of the sick have not always been able to secure quarters near the sick bed. To remedy this unfortunate situation five physicians and surgeons of Chicago are preparing to build a large private hotel and sanatorium to cost $400,000 (£80,000). This combination of hotel and sanatorium is, it may be imagined, the first time that such a plan has been put into execution, and it is yet another tribute to the practical versatility of the Western American's brain." It will be news to the Chicago profession that there are no private hospitals in this city, or that it is necessary for patients to betake themselves to hotels when they come for treatment.

INDIANA.

W. T. Davis, Ehrmandale, has been fined $20 and costs for practicing medicine without a state license.

The President of the Red Cross Medical Society, Indianapolis, has been fined $25 and costs for practicing medicine without a license.

The W. B. Fletcher Sanatorium has been incorporated at Indianapolis with a capital stock of $50,000 by Drs. William B. Fletcher, Mary A. Spink, Urbana Spink and others.

Mears Memorial Library.—Dr. J. Ewing Mears, Philadelphia, proposes to establish a medical library and to found a home for the Marion County Medical Society in memory of his father, the late Dr. George W. Mears, who was a pioneer physician of Indianapolis.

New Military Surgeons.—Drs. W. Ruston Davidson, Evansville; Paul J. Barcus, Crawfordsville, and Jacob M. Hill, South Bend, have passed their examinations and been recommended for commissions as assistant surgeons in the First, Second and Third Infantry, respectively.

The physicians and surgeons of Anderson, owing to the numerous suits for alleged malpractice, have agreed to refuse all service in surgical cases unless the patient or his family signs an agreement releasing the surgeon from liability in the event of any unsatisfactory results.

KENTUCKY.

Kentucky School of Medicine, Louisville, held its annual commencement exercises, June 26, graduating a class of forty-three.

Hospital College of Medicine, Louisville, held its annual commencement, June 27, graduating a class of fifty-seven. Dr. Lewis S. McMurtry, president of the college, delivered the doctorate address.

Kentucky University Medical Department, Louisville, held its annual commencement exercises, June 25, graduating a class of nineteen. The address to the graduating class was made by Rev. George B. Eager, D.D.

Dr. W. E. Clark, who was convicted of manslaughter in January last, has been granted a new trial by the appellate court, June 22, because of the admission of certain evidence, the failure to admit evidence of defendant, and the instructions of the court.

MAINE.

The State Board of Health, at its annual meeting, re-elected Dr. Charles D. Smith, Portland, president.

Smallpox is prevalent in Bangor. Public vaccination has been ordered and strict quarantine is being enforced. Bangor has 8 cases of the disease, Milo 5 cases, Portland 1 case, and Lagrange and Dexter each 2 cases.

The Medical School of Maine, Brunswick, held its annual commencement, June 27. This was the last class to graduate under the three-year rule. A class of thirty-nine received diplomas, and the doctorate address was delivered by Hon. Augustus F. Moulton, Portland.

Anatomical Material.—An act has been passed by the legislature requiring all public offices having charge or control over dead human bodies to notify immediately the Board of Distribution whenever unclaimed bodies come into their control, that the said board may take and remove such bodies to be used within the state for the advancement of medical education.

A "magnetic healer," of Portland, who had been notified by the secretary of the State Board of Medical Registration not to practice medicine without examination and registration and who nevertheless persisted, was indicted, tried and found guilty. The accused used the letters "S. R. S." after his name in his advertisements, and on being asked their significance, stated that they meant "Silent Rubbing Specialist."

MARYLAND.

Baltimore.

Dr. Robert Hoffman sailed for Europe July 4.

Dr. Frederick Taylor has sailed for England.

Dr. Marie E. Thalwitzer has sailed for Europe.

Dr. James M. Crayhill will sail for England July 20.

Dr. Daniel Z. Dunnott will spend the summer at Plinhimmon, Ocean City, Md.

Dr. Harry Friedenwald left with his family, on July 4, to spend the summer in Europe.

Dr. John Ruhrah, who has been studying in the hospitals of Berlin, Vienna and Paris, is now in London. He will return to Baltimore, September 1.

Memorial to Dr. Jesse W. Lazear.—Those who were associated with the late Dr. Jesse W. Lazear at Johns Hopkins Hospital, are planning a suitable memorial of his life and services.

Mr. J. W. Middendorf has contributed $10,000 to the Charlotte Williams Hospital, of Richmond, Va. The institution is a memorial to a deceased daughter of Mr. John L. Williams, of the latter place.

Mosquito Extermination.—A company has been organized here to fight the mosquitoes. It is called the New Jersey Mosquito Exterminating Company. A small stipend will be charged for which the company undertakes to rid one's premises of the pest for the season.

The mortality of this city for the week ending July 6 was 451, the largest since records of deaths began to be made. This is the more remarkable because but two weeks before the mortality had been the smallest ever known. The intense heat lasting throughout the week, and on two days reaching 103 F., is accountable for this large figure. There were 78 deaths from sunstroke, 234 were under 5 years, and 89 over 60 years of age.

Dr. Howard A. Kelly and family are at the Colonial, Ocean City, Md.; Dr. Powhattan Clarke is at Chester, Nova Scotia; Dr. C. C. Bombaugh and family are spending the summer at Niagara-on-the-Lake, Ontario; Dr. H. C. McSherry is at Blue Ridge, Summit, Pa.; Dr. W. W. Russell is at Marine Villa, Cape May, N. J.; Dr. Alan W. Smith and wife are at Rehoboth Beach, Del.; and Dr. Henry Lee Smith is at the Blue Mountain House for the summer.

Fraud at Examination.—A case of fraud was attempted at the recent examinations before the Maryland State Board of Medical Examiners. A young physician, said to be a Philadelphian and graduate of the University of Pennsylvania, applied to the board for examination, giving the name of another physician, graduate of one the Baltimore schools, now practicing in New Jersey. The scheme was discovered and a detective put on the case. The only motive found was the alleged fact that one holding the Maryland certificate can get a New Jersey certificate without further trouble. The candidate was refused the Maryland certificate, though he received a high average.

Tablet to Dr. Jesse William Lazear.—At Trinity Hall Military School, Washington, Pa., on commencement day, June 18, a tablet to the memory of Dr. Jesse William Lazear, of Baltimore, was unveiled with appropriate ceremonies. It is inscribed as follows: "In memory of the virtue and self sacrifice of Jesse William Lazear, M.D., of Baltimore, Md. Born May 20, 1866. Died Sept. 25, 1900. Prepared for college at Trinity Hall, 1880-4. Graduated at Johns Hopkins University, medical degree from Columbia University, Instructor at Johns Hopkins University, Assistant Surgeon United States Army. Died while investigating causes of yellow fever in Cuba. He gave his life to his country for the advancement of science. *Pro Deo et Patria.*"

MASSACHUSETTS.

Tuft's College Medical School held its annual commencement June 19, graduating a class of thirty-four.

Doctors Have Smallpox.—Dr. Charles B. Stevens and Dr. Campbell, of the staff of the Worcester City Hospital, and one of the nurses are ill with smallpox.

The Wage Earners' Hospital is to remove to Harvard and Albany Streets, Boston. Drs. George Van B. Buehler, Charles L. Ogden and Clarence M. Casselberry constitute the staff of the new hospital.

Franklin Hospital, Boston, was opened June 6. It has a capacity of about sixty beds, and is so arranged that patients can be cared for by their own physicians. Dr. R. Sherman York is in charge of the hospital.

Frost Hospital, Chelsea, held its annual meeting, June 21. Dr. Frederick S. Raddin was elected a member and secretary of the Medical Board. Dr. Charles H. Shackford was re-elected chairman of the board; Dr. Joseph B. Fenwick was elected admitting physician.

NEBRASKA.

Dr. John P. Lord, Omaha, has returned from a nine-months tour of Europe.

Dr. Minerva M. Newbecker has resigned as assistant superintendent of the Hospital for the Insane at Lincoln. Her successor has not yet been appointed.

New Asylum Physicians.—Dr. William L. Carlyle, Hebron, has been appointed assistant physician of the Hospital for the Chronic Insane at Hastings, vice Dr. Woodward, resigned; and Dr. Alma J. Chapman, Hastings, succeeds Dr. Ewing, resigned.

Nebraska Anatomical Society.—By an act of the legislature, the Nebraska Anatomical Society has been formed in

Omaha, and will be given possession of all unclaimed pauper bodies in the state for distributon to medical colleges. The unclaimed bodies annually range from 300 to 500.

NEW MEXICO.

State Board of Health.—At a regular semi-annual meeting of the New Mexico Board of Health, held at Santa Fe, June 3, Dr. George C. Bryan, Alamagordo, was elected president, and Dr. Walter G. Hope, Albuquerque, secretary.

Consumptives Improve.—The Government Hospital for Consumptives at Fort Bayard reports 149 patients undergoing treatment, many of whom have so improved as to be able to return to duty. A majority of the patients show marked improvement.

Medical Examiners for School Teachers.—The president of the territorial board of health has appointed twenty-two physicians to examine school-teachers in accordance with the new law which provides that no one suffering from tuberculosis shall be allowed to teach school.

NEW YORK.

Jamaica Hospital.—At the annual meeting of the medical staff of this hospital, Dr. Philip M. Wood was elected president; Dr. Henri M. Auger, vice-president, and Dr. Austin J. Blanchard, secretary. Drs. Samuel D. Nutt, of Ozone Park, and William T. Scovil, of Richmond Hill, were added to the medical staff.

Census of Consumptives.—A census of the consumptives in the state is to be taken by Dr. Daniel R. Lewis, President of the State Board of Health. This census is only for the purpose of learning the number of consumptives in the state as far as possible, and the revealing of other facts relating to the disease, of importance to the profession.

Health Report.—There were 10,327 deaths in New York state during May, or 500 above the average for that month during the preceding years, according to the monthly report of the State Board of Health issued July 3. Smallpox has been reported during the month from 24 different points and in all there have been noted 32 new cases within the past month.

The **Albany Medical College** has made several changes in its faculty. Dr. Howard Van Rensselaer will have charge of the departments of materia medica and therapeutics, and the practice of medicine. Dr. Leo H. Neuman has been appointed clinical professor of the practice of medicine and Dr. J. Montgomery Mosher is now clinical professor of neurology and electro-therapeutics. As lecturers, Drs. Arthur T. Laird, on clinical microscopy, George E. Lochner, on gynecology, and Chas. H. Richardson, on surgery, were appointed.

Buffalo.

The **Exposition Hospital** has already treated 1600 cases.

Dr. **Augustus Pohlman,** instructor in anatomy at Cornell University, Ithaca, has gone to Freiburg, Germany, for special study in anatomy.

Buffalo Academy of Medicine.—The medical section, at a recent meeting, elected Dr. Harvey R. Gaylord chairman, and Dr. Harry Rooth secretary.

The **United States Hospital Corps Camp** at the Pan-American Exposition will prove of especial interest to physicians interested in seeing a model sanitary field hospital. There is a tropical, a summer and a winter ward.

The **Buffalo Fresh-Air Mission** has opened its hospital at Athol Springs for the summer season. At this hospital a large number of infants suffering from non-communicable disease and belonging to poor parents, are treated every summer and many are restored to health.

University of Buffalo.—The faculty and alumni association of the medical department of this University have established a Pan-American bureau of information for the exclusive benefit of the alumni who are to visit the Pan-American. The bureau has been opened in the library of the University at 24 High Street, near Main.

New York City.

Dr, **Louis Fischer** sailed for Europe on *La Bretaque*, June 27.

Dr. **S. A. Knopf** sailed for London July 10, to attend the British Congress on Tuberculosis.

Dr. **Charles K. Briddon** recently completed his twenty-fifth year as attending surgeon to the Presbyterian Hospital.

The Floating Hospital Services for the children of the poor has been begun for the summer season by St. John's Guild.

The Emergency Hospital connected with the Department of Charities, at Coney Island, is completely fitted up and has an ambulance service.

Five Brooklyn Physicians, who have been sued by a debt-collecting agency, declare that they signed the contract, under the terms of which they have been sued, under a misapprehension, and that the conditions of the contract are practically impossible of fulfillment.

Claim for Expert Services Allowed.—The claim of Dr. Jackson R. Campbell, Tombs physician, for $2250 on account of services as expert medical examiner, which was disallowed by Comptroller Coler, and was referred to the corporation counsel, has been ordered paid.

In the case of Herbert C. Wadman, a patient, who died at Manhattan State Hospital, the coroner's jury rendered a verdict that Wadman came to his death from chronic nephritis and acute mania, aggravated and hastened by broken ribs and injuries to the chest and head. The jury censured the management of the Manhattan State Hospital, exonerating the Bellevue Hospital authorities, and found that the injuries were inflicted by Attendant John Foley, and that keeper Michael Carroll was an accessory.

OHIO.

Dr. and Mrs. John Edwin Brown, Columbus, sailed for Antwerp on the *Vaderland*, June 26.

Mr. H. M. Hanna, Cleveland, has endowed a chair in the Medical School of Western Reserve University.

Dr. Reginald B. Leister has resigned from the staff of the Toledo State Hospital and will practice in Toledo.

Dr. J. M. Crawford, ex-minister to Russia, has been created Doctor of Laws by the Ohio University at Athens.

B. S. Slocum, a negro, was arrested on June 24 at Amanda, Fairfield County, charged with the illegal practice of medicine.

Dr. Fred L. Wilson, of the Athens State Hospital for the Insane, has resigned and will resume practice at Washington Court House.

New Laboratory.—The Laboratory of Clinical Microscopy, Medicine and Surgery, donated by John H. Brown, of Cleveland, in memory of his brother, and by Samuel Mater, to the Medical Department of Western Reserve University, Cleveland, who dedicated with appropriate ceremonies, June 12. Dr. Herbert L. Burrell, of Harvard Medical School, delivered the principal address.

Osteopathy.—A motion to advance the case of the State of Ohio vs. Gravitt was granted by the Supreme Court of Ohio last week. This case involves the question of the practice of osteopathy under the provisions of the law which took effect on July 1, 1900, and the granting of the motion insures a speedy hearing and decision of the case.

PENNSYLVANIA.

The estate of the late Dr. William H. Daly, Pittsburg, is estimated to be worth $250,000.

Rev. William A. Passavant, of Pittsburg, widely known as a philanthropist, and a worthy successor of his father in the establishment of hospitals in various cities of the country, died suddenly at Jummonville, July 1, from apoplexy.

Appropriations.—The following appropriations were passed by the Legislature, June 25: Free Hospital for Poor Consumptives, $110,000; Taylor Hospital, Lackawanna County, $15,000; Medical Department of Western Pennsylvania Hospital, Pittsburg, $100,000; Titusville Hospital, $10,000; St. Joseph's Hospital, Scranton, $1000, and Nason Hospital, Roaring Springs, $5000.

Philadelphia.

Dr. Thomas R. Neilson has been elected assistant clinical professor of genito-urinary diseases at the University of Pennsylvania.

The State Board of Medical Examiners held an examination June 18 to 22. Three hundred and thirty candidates for certificates to practice medicine were examined.

Appropriations.—The legislature has made the following appropriations to Philadelphia medical institutions: Medico-Chirurgical Hospital, $190,000; Jewish Hospital, $10,000; St. Joseph's Hospital, $10,000; University of Pennsylvania, $25,000, and University of Pennsylvania Hospital, $58,000.

Prof. W. W. Keen, of Jefferson Medical College, has been granted two years' leave of absence and Prof. J. Chalmers DaCosta will do his work, together with his own, both in the college and in the hospital. This additional work necessitates Dr. DaCosta's resignation from his position on the surgical staff of St. Joseph's Hospital, and Dr. Charles F. Nassau has been appointed to fill the vacancy.

VIRGINIA.

Old Dominion Hospital.—Ground was broken for the new Old Dominion Hospital, Richmond, June 22.

Dr. Samuel A. Hinton, Petersburg, has been appointed city physician, vice Dr. Hugh Stockdell, deceased.

The Isle of Wight County Board of Health has been organized with Charles H. Hart, Suffolk, president; Dr. Leslie C. Brock, Smithfield, secretary.

Winchester Memorial Hospital.—Mrs. Lewis H. Hyde, of New York, has contributed $5000 toward the building fund of this hospital. Of the $15,000 required, $7000 has now been raised.

WISCONSIN.

The New Norwegian Luthern Hospital at La Crosse was wrecked during a tornado, June 28.

Dr. Horace M. Brown, Milwaukee, has sailed for London, where he will attend the British Congress on Tuberculosis.

The Alumni Association of Milwaukee Medical College has been incorporated by Drs. Lawrence Hopkinson, Ernst J. Panetti and Eugene D. Regan.

GENERAL.

Health Board and Laboratory for Manila.—The Philippine Commission has passed bills establishing a Government biological and chemical laboratory. A Board of Health, consisting of commissioner, sanitary engineer, chief inspector, laboratory superintendent and secretary, has been formed. Stations for the supply of vaccine virus will be established wherever necessary in the provinces.

War on Mosquitoes.—The Marine-Hospital Service has instructed its medical officers to aid in the extermination of mosquitoes and fleas, and to take every precaution possible to keep the pests from the hospitals and quarantine stations. It is required that all pools of water near stations of the service be covered with petroleum. Patients with infectious diseases must be protected by wire netting. The army quartermasters also have arranged for a supply of kerosene, which is to be used on all stagnant water within the confines of military posts.

Dr. S. Weir Mitchell, who, as we announced last week, has just returned from a trip around the world. Evidently the Doctor has the reputation of being a worker, for a newspaper asserts that six long novels, forty-nine sonnets, 103 quatrains and several other poems, not to mention four books of sketches, a treatise on nervous diseases, fifteen or twenty short stories, were dashed off by him at odd moments during his trip. All these precious works, we are informed, are now in the possession of Richard Watson Gilder, who has hired eight detectives to watch the stuff.

A New Journal.—The first issue (June) of a new psychiatric journal, *The Journal of Mental Pathology,* has been received. It is published in New York under the editorial management of Dr. Louise G. Roubinovitch, with Drs. Magnan, Joffrey, Raymond, Regis and Morell abroad, and Drs. Mills and Hughes, of this country, as editorial collaborators, and a very extensive staff of contributors from all parts of the world. The initial number contains articles by Drs. Marie, of Paris; Ferrari, of Italy; E. A. Spitzka, of New York, and the editor, with selections, editorials and book notices; it presents a very creditable appearance. From the reputations of the collaborators and contributing staff, we shall look for high-class work in the articles appearing in this new journal; the character of those in the present issue promises well for the future.

CANADA.

A death from tetanus following vaccination is reported from Brantford, Ont.

Charity Bequests.—By the will of the late Senator Villeneuve, Laval University gets $25,000, Notre Dame Hospital, Montreal, $5000, and the Catholic Orphan Asylum, $5000.

Dr. A. T. Stanton, late of the house staff of the Toronto General Hospital, has been appointed surgeon of the C. P. R. steamer *Empress of China* of the Pacific fleet. Dr. Stanton left last week for the Pacific Coast.

Militia Dental Corps.—At the annual meeting of the Eastern Ontario Dental Association held in Ottawa, on July 4, a resolution was passed requesting Dr. Borden, minister of militia, to take steps to have a dental corps appointed in connection with the Canadian Militia.

Montreal is once more free of smallpox; quarantine was raised on the last house last week, and there are now no houses quarantined in that city. There are only three or four patients at the smallpox hospital, and it is expected they will be released in the course of a few days.

Dr. Montizambert, Director-General of Public Health, and Dr. McEachren, chief veterinary inspector for the Dominion, have been delegated by the Canadian government to attend the conference to be held in London, on July 22, to consider the question of prevention and cure of tuberculosis.

The Royal College of Dental Surgeons assembled in convention in Toronto last week, there being a large attendance of outside members. Dr. Walter Willmott, of Toronto, addressed the convention on the use of the *x*-ray in dentistry, and showed the importance the rays were in the profession of dentistry.

Montreal General Hospital.—During the month of June there were 262 admissions to this hospital, 256 discharges and 15 deaths. The average number of patients daily in residence was 167. The average of typhoid fever cases was 15. During the hot spell there was a large number of cases of sunstroke and heat prostration, but there was only one death from this cause. There is at present a great demand for trained nurses in Montreal, and the Training School is constantly besieged with enquiries. The graduates of this institution now number 180.

Cottage Hospital Scheme.—The idea of special collecting cards in connection with the Cottage Hospital scheme has proved very successful, and Lady Minto is pleased with the results so far. Nearly $20,000 has reached her excellency in this way from various parts of the country, and the countess is especially delighted with the work of the ladies of Montreal. In London, Ont., the scheme of collecting has been taken up by a special committee, and there excellent progress has been made. A rather curious circumstance is that the responses from Winnipeg are almost nil. Throughout the West around Regina and Saskatchewan, the scheme is being taken up with interest, and even from far-off Yukon subscriptions are coming in.

FOREIGN.

The Berlin University is planning an institute for radiotherapy. Professor E. Lesser is to be placed in charge.

The Plague at Rio Janeiro.—The four cases of bubonic plague recently found in Rio Janeiro were all brought from Oporto, Portugal.

The Plague at Capetown.—The total number of plague cases up to July 7 has been 760. The deaths have numbered 361, including 65 Europeans.

Glasgow University Honors Germans.—The University of Glasgow, on the occasion of its 450th anniversary, conferred honorary degrees on Quincke, Mikulicz and Kronecker, of Germany.

Reorganization of Turkish Medical Colleges.—Professor Rieder, of Bonn, and Dr. Deycke, of Hamburg, have been reorganizing the medical schools in the Turkish empire, at the request of the sultan. Rieder has been appointed general inspector of medical education.

Professor von Leyden's Jubilee.—The twenty-fifth anniversary of Professor Leyden's incumbency of the chair of medicine at Berlin was celebrated with much ceremony, June 8, by his friends and pupils. He was the successor of his master, L. Traube, and has worthily sustained the traditions connected with the chair.

Memorial to Pettenkofer.—Munich is planning a statue of Max von Pettenkofer, and also the erection of a Pettenkofer building, to contain a museum of articles connected with Pettenkofer's life and services to hygiene and sanitation, and also rooms for meetings of medical and other scientific societies, and a library. The committee that has the matter in charge is formed of the municipal authorities and chiefs of the Institute of Hygiene, etc.

Honors to the Memory of Physicians.—A portrait bust of Theodor Meynert was unveiled at the Vienna University.

May 19, nine years after his death. The memorial was erected by the government in honor of Meynert's discoveries and achievements in psychiatry. Berne is preparing to honor in the same way the memory of A. von Heller, the famous scientist and physician of the eighteenth century, who, as simultaneous professor of surgery, anatomy and botany, conferred such luster on the University of Goettingen.

The Virchow Fund.—The amount raised for this fund was 78,000 marks when it was first presented to Virchow in 1881, on his sixtieth birthday. According to his wish it is devoted to anthropologic, ethnologic and prehistoric research. Six scientific expeditions have received appropriations from the fund and their discoveries have been duly published and illustrated in the Transactions of the Berlin Anthropological Society. The excavations were in the Caucasus, Malacca and in Cyprus. The expenses of Cetti's fasting test under the supervision of Senator, Zuntz and Munk were also defrayed from the fund, and the important scientific researches of Stuhlmann, Mies and Meslort on prehistoric biology, etc., published. The fund has been increased by various gifts until it is now 137,000 marks. The committee in charge are anxious to have it reach 200,000 marks, or about $80,000, by October 13, Virchow's eightieth birthday, as mentioned in the appeal published last week, p. 40. We learn from our exchanges that, during a recent windstorm, he was hurled against a tree and severely bruised in the forehead.

LONDON LETTER.

The Tuberculosis Congress.

The arrangements for the forthcoming Congress on Tuberculosis are almost complete and the meeting promises to be a very successful and important one. Over 1,200 applications for membership have been received and the number is expected to exceed 2,000. On Monday, July 22, at 3 p. m., at St. James' Hall, the Congress will be opened by H. R. H. the Duke of Cambridge at the request of the King. His Majesty has taken a great interest in the tuberculosis question and, indeed, in sanitary questions in general. When he was Prince of Wales he presided over the Society for the Prevention of Tuberculosis and it was arranged that he should preside at the opening of the Congress, but his accession to the throne has caused him to cancel the arrangement and to appoint his grand-uncle in his stead. Abroad, measures have been taken to secure a large number of foreign visitors. A German committee has been formed under the presidency of the Duke of Ratibor, and a French committee under Professor Brouardel. Amongst those enrolled are Prince d'Arenberg, Profs. Lannelongue, Proust and Nocard. Professor Calleja, president of the next International Congress in Madrid, is promoting the interests of the Congress in Spain. Profs. von Schrötter and Weichselbaum will represent Austria. Among American representatives are Profs. Osler and Janeway. Numerous adhesions have been received from Italy, Hungary, Belgium, Norway and Sweden, Holland, Switzerland, and Portugal. A reception will be held at 9 p. m., on the opening day at the Queen's Hall by the president of the Council and the executive officers of the Congress. On July 23, at 3 p. m., the second general meeting will be held at St. James' Hall, when an address will be delivered by Koch, Lord Lister in the chair. Koch will deal with the question: "Whether what has been done and what is likely to be done for the prevention of tuberculosis corresponds to the etiological conditions of the disease and how far changes with view to more thorough treatment should be instituted." Professor Brouardel will deliver an address on July 24. Receptions, garden parties, river parties, etc., will be held in connection with the Congress, which promises to be as successful from the social as the scientific standpoint. Arrangements will also be made for visits to Sanatoria and other places of interest.

Departure of the Fifth Malaria Expedition From the Liverpool School of Tropical Medicine.

The extraordinary enterprise of this recently established school is shown by the organization of five malarial expeditions. Major Ross, whose name has been rendered famous by the proof of the mosquito theory of malaria, and Dr. Turner, assistant lecturer in pathology at the University of Glasgow, have been sent out to West Africa in order to attempt the extermination of the anopheles mosquito. It is thought that the Colonial Office will send a representative to assist in the work. Mr. Chamberlain has sent a message wishing the expedition every success and intimating that he has instructed the Governor of Sierra Leone and other officials to give the expedition every assistance in their power.

Army Medical Reform.

A committee of experts has been appointed to consider a scheme of reform drawn up by the Secretary for War. It consists of the following members: Howard H. Tooth, M.D., F.R.C.P.," representing St. Bartholomew's Hospital; G. H. Makins, F.R.C.S., St. Thomas's Hospital; Alfred D. Fripp, Guy's Hospital; Sir F. Treves, London Hospital; Alexander Ogston, Scotland; Lieutenant Colonel Keogh, Ireland; E. E. Perry, M.D., F.R.C.P., Senate of London University; Surgeon-General Hope, President of the Medical Board, India Office. Most of the civil practitioners have served in the South African war and therefore are peculiarly fitted for the task of remedying the defects of the army medical system.

Suicide of a Surgeon.

Considerable sensation has been produced in medical circles by the suicide of Mr. Thomas Bond, the well-known medical jurist who figured in almost every *cause celebre* in which medico-legal questions arose. He had been suffering from cancer of the prostate, which caused great pain. He took considerable morphia and was heard to say: "I am sure I shall jump out of the window or blow my brains out." Generally speaking, he was a strong-minded and courageous man. During the absence of his nurse he threw himself out of the window and fell on his head a distance of 50 feet. In 1873 he was appointed assistant surgeon to the Westminister Hospital, but it was as an expert in criminal cases, such as the trials for murder of Kate Webster, Lamson, Lefroy, and Mrs. Pearcey, that his reputation lay. He had extraordinary experiences of railway accidents, and companies often resorted to his services to protect themselves against the claims of malingerers. He was one of the best of medical witnesses. His evidence was clear and carried conviction, and having formed an opinion he adhered to it with a tenacity which no cross-examination could shake.

Report of the Committee of Inquiry of the National Hospital for the Paralyzed and Epileptic.

The circumstances leading to the appointment of this committee have been previously described in THE JOURNAL. The report which is unanimous has been presented to the governors. The witnesses heard comprised experts in hospital management, Lord Lister, Sir Wm. Broadbent, Sir Sidney Waterlow and Mr. C. S. Loch; members of the board of management; medical officers of the hospital; present and past house physicians; present and past matrons and nurses; the Secretary-Director and other officials. Of the allegations made by the medical staff the committee find that some of the most important are true; some have foundation in fact, but are exaggerated, and that others are not supported by sufficient evidence. With regard to the question of diet they find that at the beginning of last year the supplies to particular wards fell short more often than ought to have occurred. The quality of the meat, fish, eggs, and vegetables was often far from good. In a few cases the personal cleanliness of the patients did not receive sufficient care. In some wards the supply of linen was deficient. The supply of draw-sheets, which from the character of the diseases treated in the hospital are required in large quantity, was very deficient. The method of communication between the medical staff and the Board—through the Secretary-Director—has not worked well and the committee are of opinion that the direct representation of the staff on the Board would be of great and permanent benefit to the hospital and would have prevented the present schism. The allegation of the Board that such representation would tend to destroy the religious and philanthropic character of the hospital, is dismissed as unfounded. The committee therefore recommend that the Board be increased by two members chosen by the medical committee from the medical staff. This change would tend to bring the hospital into line with similar institutions. The committee disapprove of the investiture of the Secretary-Director with so much power, and find that he has not used it with tact and judgment, but has exceeded his functions. They recommend the abolition of this office and the appointment of a secretary entrusted with ordinary powers who should be the chief and executive officer of the Board of Management, but be restrained from interfering with the lady superintendent or the medical staff, or that a secretary and medical superintendent should be appointed as a permanent officer, who should not only discharge the duties of secretary and house physician, but should be the responsible and resident head of the whole institution under the Board of Management. So far the prolonged and stubborn contest, which threatened to wreck one of the most useful charities in this country and one of the most famous hospitals in the world, has ended in the com-

plete victory and vindication of the medical staff. The Secretary-Director, an able and energetic official, who has served the hospital more than thirty years, had gradually been allowed to take almost all the powers of the governing body into his own hands, and in the end attempted to over-rule the medical staff on such purely medical questions as nursing and diet. The attempt has ended as it deserved.

PARIS LETTER.

Cytodiagnosis in Inflammatory Diseases of the Nervous System.

Cytodiagnosis as a means of distinguishing certain forms of mental diseases, accompanied by inflammation from others which are neuroses, has been studied recently by Dr. Seglas and Nageotte. In 14 cases of mental disease simulating progressive general paralysis, lymphocytosis was found in 5 cases which proved to be paresis, whereas in the other 9 cases, this symptom did not exist. Dr. Joffroy, the neurologist, remarked that it was quite noticeable before the other symptoms of paresis. Drs. Dupré and Devaux communicated at the same meeting of the Medical Society eight observations of patients on whom lumbar puncture was performed. In two cases of progressive general paralysis, leucocytosis was very apparent, as indicated by Widal and his pupils. The six other cases were: One senile dementia, one organic dementia, one precocious dementia, and three cases of delirious melancholia. There was no leucocytosis in these cases. Dr. Widal recommended not drawing off more than 3, 4, 5, or, at the most, 6 cubic centimeters of liquid. The patients should remain in bed the rest of the day, and not raise their head from the pillow. Very fine needles should also be employed, as there is less risk of tearing the meninges.

The Use of Large Doses of Antitoxin.

Dr. Widal spoke of the method he followed out in the treatment of diphtheria. He has often seen patients come into the Maison Municipale de Sante, a species of private hospital, at the fifth or even seventh day of an attack, without having been injected. In such cases he gives doses of 60, 80, or even 100 grams of serum, and he has never seen any accidents due to the use of such large doses. In such cases paralysis may supervene, and even sudden death. It should be remembered that the serum treatment can not act when cellular lesions are already produced, and Dr. Widal therefore prefers injecting serum to a patient who does not need it than waiting too long in other cases.

Mortality of Infants in France.

Professor Budin, who has succeeded to Tarnier as professor of clinical obstetrics, made a report recently to the Academy of Medicine on the mortality of children after birth in France. According to some statistics published recently, out of 1000 deaths, there are about 167 of children less than a year old. At Lille the number is 274, 342 at Dunkerque, 414 at Nancy. This excessive mortality is due to the prevalence of gastro-enteritis, which causes 385 deaths out of 2000; respiratory troubles, which bring about 147 deaths; congenital debility produces 171 cases; tuberculosis 25; contagious diseases, 50; and all other causes, 222. Professor Budin showed how these different diseases could be fought in a measure, and gave a description of various institutions not only in Paris, but at Florence, Brussels, and Montreal, where advice was given to mothers and sterilized milk was furnished. According to Drs. Balestre and Giletta, 76 per cent. of the deaths occurring during the first year could be prevented. Professor Fournier reminded the assembly that syphilis was a potent factor in the death-rate of children, half, if not more of the deaths occurring in families suffering from syphilis, being due to this disease.

Epidemic of Lockjaw.

At a meeting held by the Society of Surgery, on June 5, Dr. Reynier, surgeon of the Lariboisière Hospital, spoke of three cases of lockjaw which had been seen in his service. Six years had elapsed without his having observed a single case, when in January last he saw symptoms of it in a boy he had operated for hernia. The patient died, and four days after a woman in another ward showed signs of this disease and died the eighth day. A patient who was operated at about the same time was injected with antitoxic serum. Eight days afterwards lockjaw made its appearance, but on increasing the dose of chloral from 12 to 20 grams, the symptoms grew less alarming, and the patient recovered after three weeks. Dr. Reynier thought that it might be the catgut which had been the cause of the infection. Dr. Quénu said that he had never seen a single case of lockjaw cause an epidemic of this disease, and as for the catgut, it could be easily sterilized in alcohol at a temperature of 120° C. Dr. Delbet remarked that he remembered the case of a patient who had a mild form of lockjaw, and who was treated by injections. He rapidly grew worse and died the next day. Dr. Brun described a similar case in a child three years old. On the other hand, Dr. Bazy said that he always had injections made to patients who had bad wounds received in the street and he had only seen so far two cases of lockjaw with men who had not received this treatment. He always gave chloral in large doses in such cases.

Oxygen as a Treatment for Boils and Carbuncles.

A new treatment against boils and carbuncles has been advocated recently by Dr. Thiriar, professor of clinical surgery at Brussels. It consists in the injection of oxygen into the tumor formed by the boil. A receptacle containing oxygen under pressure may be used, and put in communication with a needle, which is inserted under the skin. One injection is found sufficient for an ordinary boil; for a carbuncle it is well to inject oxygen through the different openings. The anthrax becomes painless in a relatively short space of time, and the inflammation disappears in a few days.

Book Notices.

A TEXT-BOOK OF GYNECOLOGY. Edited by Charles A. L. Reed, A.M., M.D., President of the AMERICAN MEDICAL ASSOCIATION (1900-1901.) Illustrated by R. J. Hopkins. Cloth. Pp. 900. Price, $5.00. New York: D. Appleton & Co. 1901.

This is a composite book—a book with many authors. It is the kind that the average book agent will insist is, and must be, good because so many good men have contributed to it. The reviewer believes that, as a rule, the opposite is true, viz., that when the responsibility is divided the result is likely to be as the meal prepared by many cooks. However, in the book before us the editor has come as near to eliminating the objections to a composite book as one could wish. While there are thirty-one contributors, a thorough editorial revision has made a uniformity of style and expression throughout that would have been impossible with such a large number of contributors had this not been made. The awkwardness, the lack of continuity of thought, and the repetition that is so common when many contributors write on allied subjects, have all been eliminated. Even the references to their own work by the different writers has been rendered into the third person. There has been a greater subdivision of labor in the preparation of this book than is usual, even in this age of collaboration. Thus we find among the contributors specialists in pathology, in neurology, in dermatology, in hygiene, etc. In the chapter on neoplasms of the uterus there are no less than eight different writers; but when it is remembered that each of these has obtained a reputation in the subject on which he writes, and that the whole has been made consecutive by the editor, all objections to this multiplicity of contributors is removed. While much of the work is of the composite nature, quite a number of the subjects are considered by individuals. Three chapters devoted to the subject of Diseases of the Female Generative Organs are written by M. L. Harris. These would make a splendid monograph on the subject, for they treat it in an exhaustive manner. The writer shows that he has a thorough knowledge of the matter, and has presented it in a most acceptable manner. Some of the subjects considered do not strictly belong to a work on gynecology—as, for instance, movable kidney, tuberculosis of the kidney, renal calculi—but they none the less add to the value of the book. The chapter on Pelvic Diseases and the Nervous Affections, by Dercum, is a valuable one. Dercum discusses the subject of neurasthenia and hysteria from the standpoint of the neurologist, but every gynecologist will endorse the assertion that no operation should be done simply to remove symptoms that are characteristic of the neuroses, but should be done for symptoms properly belonging to pelvic disease itself, and for this alone; in other words, operations should be

made on surgical indications only. The three chapters on rectal diseases are out of place in a book on gynecology. The editor, in the opening paragraph, defines gynecology as "a consideration of the names, causes, prevention, diagnosis, pathology, and treatment, of diseases peculiar to women." The diseases of the rectum as they relate to the various disorders peculiar to women, are considered in their appropriate places in the book where they ought to be considered, and piles and other affections of the rectum that are common to both sexes do not come under the definition given.

While evidently it was not the design to give an elaborate description of the various operative procedures, or to take a superabundance of space with a description of minor details, yet the technic is so well presented in nearly every instance that the student will find it as helpful as though pages had to be read rather than paragraphs. The chapter on Abdominal Section is a good illustration of clear cut and easily understood descriptive writing; there is no forest of verbiage to push through, no underbrush of useless detail to get rid of. The illustrations are practically all new, being made especially for this work under the editor's direction. They are excellent and numerous. On the whole the editor is to be congratulated on the splendid work he has done in producing such an excellent up-to-date work on gynecology.

A MANUAL OF HYGIENE AND SANITATION. By Seneca Egbert, A.M., M.D., Professor of Hygiene, and dean of the Medico-chirurgical College of Philadelphia. Second Edition, Enlarged and Thoroughly Revised. Illustrated with 77 Engravings. Cloth. Pp. 435. Price, $2.25. Philadelphia and New York: Lea Brothers & Co. 1900.

This second edition, occurring within two years after the appearance of the first, is itself a recommendation of any book of this class, reaching as it does, only a comparatively limited number of readers. The book is designed not merely for the medical man, but also for everyone who is interested in subjects of healthful living. Dr. Egbert has put in a convenient and readable form the main facts of hygiene and sanitation, and in the present edition has added a chapter on military hygiene as being indicated by comparatively recent events. The book as a whole has been revised, and therefore is presumed to be fully up to date. As far as we have inspected it, we find no serious discrepancies or misstatements. It is a work that can be honestly recommended not only to the medical man, but to his patients and especially to all persons who hold public offices, or even in the way of being members of boards, trustees, or otherwise having to do with matters which are in any way concerned in the question of sanitation.

ATLAS AND EPITOME OF OPHTHALMOSCOPY AND OPHTHALMOSCOPIC DIAGNOSIS. By Prof. Dr. O. Haab, Director of the Eye Clinic in Zurich. From the Third Revised and Enlarged German Edition. Edited by Geo. E. de Schweinitz, Professor of Ophthalmology, Jefferson Medical College, Philadelphia. With 152 colored lithographic illustrations and 85 pages of text. Cloth. Price, $3.00 net. Philadelphia and London: W. B. Saunders & Co., 1901.

Professor Haab's work on ophthalmoscopy is valuable to the student and indispensable to the specialist, for nowhere else can be found such a fine pictorial collection of changes and lesions of the eye-fundus as this volume contains. The American editor has further enhanced its usefulness by annotations and additional ophthalmoscopic illustrations. Not the least pleasing feature is the low price at which this work of art has been placed in the market.

HEALTH AND HYGIENE FOR THE HOUSEHOLD. By John Joseph Nutt, B.L., M.D., Member of the American Medical Association. Cloth. Pp. 69. Price, 50 cents. New York: The Abbey Press.

The author of this little work endeavors to acquaint the lay reader with some of the leading facts of sanitation, and its circulation ought to do much good. Such advice is what the great majority of the people need; unfortunately, however, most people will go on in their old way. We can recommend it to the public as containing a good deal of valuable and sensible advice.

Married.

PHILIP LE SAGE, M.D., to Miss Lizzie Meers, both of Joliet, Ill., June 26.

JAMES C. HOLDSWORTH, M.D., to Miss Mary E. Wolf, both of Baltimore.

JOHN M. FOUTS, M.D., to Miss Flora Jones, both of Centerville, Ind., June 26.

J. HARRY ULRICH, M.D., to Miss Sallie Rittenhouse, both of Baltimore, June 25.

ROBERT W. MARKLEY, M.D., to Miss Myrtle Weltzier, both of Huntley, Ill., June 26.

GEORGE W. PORTER, M.D., to Miss Mabel Boyer, both of Ashton, S. Dak., June 25.

THOMAS J. CASE, M.D., Unionville, Iowa, to Miss Dellie Hard, of Albany, Iowa, June 26.

W. F. BLACK, M.D., Sayreton, Ala., to Miss Elsie Kelly, of Woodlawn, Birmingham, Ala., June 21.

ARTHUR G. EMERSON, M.D., Lewiston, Neb., to Miss Marion Riddell, of David City, Neb., June 26.

AUGUST CONRAD SCHUETZLER, M.D., Toledo, Ohio, to Miss Lapworth, of Hokedale, Mass., June 29.

WILLIAM E. H. MORSE, M.D., Algona, Iowa, to Miss Carrie I. Warrick, of Davenport, Iowa, June 21.

Deaths and Obituaries.

Joseph Le Conte, M.D., College of Physicians and Surgeons, New York, 1845, died July 5, in the Yosemite Valley, where he had gone for a brief outing. He practiced at Macon, Ga., but afterwards took up the study of natural science under Agassiz. In 1851 he became professor of natural science at Oglethorpe University, in Georgia. He was employed by the confederate government as a chemist during the war. In 1869 he was appointed professor in the University of California. He had a national reputation as a teacher and writer in philosophy, history and science.

J. Augustus Ehler, M.D., Pennsylvania Medical College, Philadelphia, 1841, died, June 29, at his home in Lancaster, Pa., aged 81. He was a member of the State Medical Society, and of the American Medical Association, an organizer of the Lancaster County Medical Society, and was reputed to be the oldest practicing physician in Pennsylvania.

William E. Wright, M.D., College of Physicians and Surgeons, Keokuk, Iowa, 1866, a member of the American Medical Association, the Iowa State Medical Society and until a short time before his death, president of the Marion County Medical Society, died at his home in Knoxville, Iowa, June 19, aged 60.

Dr. Thomas P. White, University of Strasburg, Germany, 1880, died at his home in Cincinnati, June 29, aged 46, from heart disease, after an illness of some months. He had been for a number of years physician to St. Mary's Hospital; also trustee of the Public Library of Cincinnati.

James W. E. Roby, M.D., New York University, 1887, died in St. John's Hospital, Long Island City, June 25, aged 38. He began practice in the Eastern District of Brooklyn, where he became widely known.

Harry A. Merchants, M.D., Albany (N. Y.) Medical College, 1897, a member of the East Hampden and Massachusetts State Medical societies, died at his home in Monson, from blood-poisoning, June 25, aged 34.

John Beauregard Hart, M.D., University of Maryland, of Baltimore, died at the Sheppard and Enoch Pratt Hospital, near Baltimore, June 29, from apoplexy.

E. Norris Lloyd, M.D., Jefferson Medical College, Philadelphia, 1886, of Yardley, Pa., died in Philadelphia from a self-inflicted wound in the throat, June 21.

Samuel Turner, M.D., Louisville National Medical College, 1894, committed suicide by hanging, June 28, while of unsound mind by reason of the intense heat.

Philip A. Taliaferro, M.D., Jefferson Medical College, Philadelphia, 1850, of Wareneck, Va., died suddenly, while sailing, at Gloucester Court House, Va.

John G. L. Whitehead, M.D., Philadelphia College of Medicine and Surgery (now extinct), 1852, died at his home near Crosswick, N. J., June 29.

John H. Groff, M.D., University of Maryland, Baltimore, 1866, for quarter of a century a practitioner of Penngrove, N. J., died at his home in that place, June 19.

Edward P. Stuart, M.D., New York University, 1877, died at his home in Penn Yan, N. Y., June 23, from tuberculosis, after a long illness, aged 50.

Ebenezer H. DeLand, M.D., an old and respected practitioner of Worcester, Mass., died at his home in that city, June 22, from pneumonia.

Lewis M. Eastman, M.D., University of Maryland, Baltimore, 1859, died at his home in Baltimore, June 27, from paralysis, aged 64.

Edward M. Estes, M.D., University of Louisville, 1878, died at his home in McKinney, Ky., June 19, after a long illness, aged 45.

John P. Wheeler, M.D., New York University, 1843, long a resident of Hudson, N. Y., died there June 28, aged 84.

Alson J. Foster, M.D., University of Minnesota, 1901, died at the home of his parents in St. Paul, Minn., June 23.

J. Abbott Galloupe, M.D., Harvard Medical School, died suddenly in his office in Beverly, Mass., June 25, aged 29.

William R. Barker, M.D., New York University, 1882, died at Newport, Md., June 22.

Miscellany.

Woman's Medical College of Pennsylvania.

This college, now in the fifty-second year of its existence, has just issued the annual report of its maternity department, as follows: The report of the out-obstetric department for the session of 1900-1 shows the number of cases attended from May 1, 1900, to May 1, 1901, 302; the number of children born was 303. Of these, vertex presentations amounted to 285; face, 2; podalic, 10; transverse, 5. There were no maternal deaths; the fetal deaths were 20. The number of after-visits made by physicians and students was 5017. The maternal complications consisted of generally contracted pelvis, 3; oblique pelvis, due to hip-luxation, 1; rhachitic flat pelvis, 2; albuminuria, 2; placenta previa, 1; double vagina, 1; perineal and vaginal lacerations, repaired, 67. The fetal complications consisted of shoulder presentations, 2; funic prolapsus, 5; prolapse of hand, 3; Naegele's obliquity of head, 2; breech and footling presentations, 10; face presentations, 2; twins, 4; monstrosities, 2; and ruptured cord, 1. The operations were: axis traction forceps, 2; high forceps, 3; low forceps, 6; internal version, 3; manual extraction on breech or foot, 5; craniotomy, 1; decapitation in neglected transverse, 1; operation for ankyloglossia, 9; repair of perinei and vaginæ, 67. One student attended 26 cases; six students attended, each, 12 cases; two students, each, 10 cases; twelve students, each, 9 cases; eight students, each, 8 cases; three students, each, 7 cases; three students, each, 6 cases. The number of cases attended since foundation of Maternity Hospital of the College in 1888, has been 2500. The number of maternal deaths during that time was only 2. In the hospital the number of cases delivered was 110, with no maternal deaths, and 7 fetal deaths. The maternal complications of those in the hospital consisted of, placenta previa, 1; low implantation of placenta, 1; hydramnios, 2; kyphotic pelvis, 1; funnel-shaped pelvis, 2; generally contracted pelvis, 12; rhachitic, flat pelvis, 2; mitral stenosis, 1; prolapsus of hand of child, 2; and postpartum hemorrhage, 1. The following operations were attended by the students: axis-traction forceps, 2; high forceps, 8; forceps in cavity, 12; version, 2; Cesarean section, 1; Dührssen's incisions and repair, 3; episiotomy, 6; primary perineorrhaphy, 23; amputation of supernumerary thumb, 1.

Testimonials and Patent Medicines.—The manner in which at least one large patent medicine manufactory secures its recommendations were recently exposed in this city. Two young men, agents of the Peruna Medicine Company, approached Mayor Foeltzer with an offer of one dozen fine photographs for a recommendation of the wonderful curative powers of Peruna. "But," said the mayor, "I have never even seen a bottle of Peruna, let alone being lifted from the brink of the grave by using it." "That doesn't make the slightest difference," replied the agent coolly, "all you are asked to do is to sign your name as the mayor of Benton Harbor at the bottom of a sheet of paper and authorize us to write the recommendation. No one here will ever know anything about the affair as the recommendation and photo will be published in only eastern papers. It will help us to sell Peruna and will help you to get a dozen photos." The mayor read a severe lecture to the agents and then gave them two seconds to leave his presence. Discussing the matter to-day he said: "Those who take up with the Peruna scheme are almost murderers. Suppose, for instance, that a sick person is led to dismiss the doctors and to feed on Peruna by these fake recommendations, and then dies. Wouldn't it come pretty close to murder—murder for a dozen photographs." The Peruna agents succeeded, nevertheless, in placing a great number of photographs in both St. Joseph and Benton Harbor. In St. Joseph recommendations were secured from some of the highest city authorities and most reputable citizens. These will be published in hundreds of newspapers in the eastern states and will lead perhaps thousands of sufferers to pay their good money for a worthless medicine. Worthless, because it is presumed that an honest medicine would be boomed exclusively by its merits.—*The Evening News*, Benton Harbor, Mich., July 6, 1901.

Dentists for the English Army.—The British war office has, according to *The Lancet*, recently been asked to send to the army in South Africa four dentists, with the view to prevent the invaliding of the men by reason of "bad teeth." The authorities have complied and have applied to the British Dental Association for advice as to instruments, furniture, etc. The medical officers of the navy are now specially trained in dentistry; moreover, a complete set of dental instruments is supplied to each ship as part of the new outfit of surgical instruments.

German School Reform Congress.—The second annual gathering in Germany of persons interested in the hygienic evolution of schools, met at Wiesbaden, May 31. Resolutions were adopted urging the appointment of medical inspectors for all institutions of learning, from the lowest to the highest. The substitution of the Latin handwriting for German script was almost unanimously advocated. We mention gratefully, by the way, that our German medical exchanges are always printed in the Latin letters, that is the same as used in America, France, England, etc.

Danger in Nursing Bottles.—Physicians do not need to be told that unclean nursing-bottles are a menace to the lives of babes—but the mothers do. It is astonishing how many mothers are not only careless but actually ignorant of this danger, and it is only by repeated warnings that they are made to realize its importance. Thousands of infants are carried off every summer from this cause that might easily be saved by proper precautions on the mother's part.

International Leper Sanitarium.—The *Gazetta degli Ospedali* states that Spain is strenuously objecting to the choice of an island off Tarifa as the site of the proposed international leprosorium, fearing contagion of her possessions in Africa. Dr. Ovilo and Lieut. Castela have been delegated to present the matter at the approaching meeting of the international committee at Tangiers.

The German Committee for the Study of Cancer held a meeting recently which was addressed by Professor Schuetz on the subject of carcinoma in animals. He stated that cancer is rare in horses, but on the other hand, it frequently occurs in dogs. The external integuments are usually affected.

Professor **Mantegazza's Fortieth Professional Anniversary.**—The 30th anniversary of the founding of the Florence Anthropologic Society was celebrated in connection with Mantegazza's jubilee. It is announced that an anthropologic laboratory is to be founded in his honor. Retzius brought a greeting to him from the Swedish Society, and Virchow represented his Society.

A **Central Station for Testing New Medicines** is to be organized in Germany in connection with the National Public Health Department. The necessity of such an institution is shown by the fact that 126 new medicines were put on the market in 1899-1900.

The **Spanish Authorities** are putting up a memorial tablet on the house occupied by the illustrious anatomist, R. Martinez Molina, at Madrid. In our Spanish exchanges he is called the "Perla de San Carlos."

Chair of Oto-Laryngology at Rostock.—The University of Rostock is the first German medical faculty to have a regular chair for this specialty. Professor Koerner is the first incumbent.

Professor Piero Giacosa, of Turin, has been chosen president of the section of the history of medicine in the International Congress of History to be held at Rome this fall.

Association News.

THE ST. PAUL MEETING AS VIEWED BY OUR CONFRERES.

From the Columbus Medical Journal, June.

The St. Paul meeting of the American Medical Association has been pronounced by those in attendance as one of the best in the history of this great organization. The registration was almost as large as it was at the Atlantic City meeting last year, while the Section attendance was better.

The papers were, "in almost every instance above the average in scientific interest and practical value." . . . The large attendance at the Sections, and extended discussions which were full of interest, indicate that the members were making no holiday out of the sessions. The able and stimulating address of President Dr. C. A. L. Reed, who extended greetings and invoked upon the deliberations "the spirit of liberty, courage, progress, and truth," set the pace in high thinking and earnest inquiry which characterized the meeting throughout.

The presentation and unveiling of a portrait of the founder of the Association, Dr. Nathan S. Davis, was a handsome and timely recognition of the services of this distinguished leader, who, in the language of Dr. Pennington, has perhaps done more than any other individual in promoting the efficient social organization of the medical profession throughout the United States, and in elevating the standard of medical education. This ceremony led to the appointment of a committee to secure, without expense, the portraits of past presidents of the Association. The adoption of the revised constitution and by-laws assures an effectual reorganization which will bring the state societies into more vital relations with the Association, and, by the elimination of the general morning meetings, after the first day, will give more time for Section work. The limitation of the number of papers will insure more careful preparation, and more deliberate consideration of those on the program. The completeness of arrangements reflected credit upon the local profession, and the officers of the Association, while the hospitality of the twin cities of the West won the hearts of every visitor. The first meeting of the century has revealed new phases of medical science, full of promise, and under a new constitution initiated a new era of fraternal organization.

From the Southern Practitioner, July 1.

Although the meeting at Atlantic City was perhaps larger than that at St. Paul, it had but little advantage in point of numbers; and the great change in the working methods of the organization make the last meeting notably the most important in its history. While the character of the organization is not changed, the very important change made in the future as pertains to "business," as it may come before the Association, is not only a marked feature, but one of the very greatest importance, and one that we confidently believe will redound to great good. . . . Outside the possibility of greater advantages of transacting its business properly, a longer time is afforded for the scientific work of the Association. Farther, it foreshadows, or should do so, a complete reorganization of State organizations, and no time is more suitable than the present; and we most sincerely hope to witness, within the immediate future, the reorganization of all along similar lines. Possibly local environments or customs may require some slight variations, but the general characteristics of the National, should pervade all State and Territorial Societies.

The addresses of the President, together with that on Medicine, Surgery and State Medicine, as well as the scientific work in all the Sections, so far as we can learn, compare favorably with any preceding meeting. The exhibits were well up with former meetings, and the hotel facilities were satisfactory. As for the social entertainments afforded, both general and private, as an experienced delegate, one who has been quite a regular attendant for a number of years expressed himself, "St. Paul just spread herself, and Minneapolis helped her." The election of Dr. John A. Wyeth, of New York, as President, is a fitting recognition of his abilities as a student of science, a faithful and careful worker, an eminent surgeon, and a most worthy member of his profession, and courteous gentleman. The selection of the other officers we believe will give as much satisfaction as is possible, as will also the selection of Saratoga as the next place of meeting.

THE JOURNAL of the Association is in a most prosperous condition, . . . and is rapidly becoming just what it should, the exponent of American medical opinion and thought. Yes, truly, an organ of the American medical profession with influence and weight.

From Medical Fortnightly, June 25.

It was a great meeting in every sense of the word. The attendance was large, over 2000 physicians were registered, while fully 500 more were present as lookers on. The weather was not perfect, but in spite of the rain, it was agreeable and the elements did not interfere with the proceedings of the society. St. Paul looked its best, the people did their best, and the physicians went one better, and were tireless in their desire to make the meeting a memorable one to all who came. As a result St. Paul will always figure in the history of the society. The greatest event of the meeting was the adoption of the plan of reorganization, which was unanimously accepted and became a law at this meeting.

The society is now upon a solid working basis, with stable features and powers which will be sure to yield results. The scientific work of this meeting was of a superior order, the various sections being full and of especial service to all who attended. The number of papers being less than at former meetings, more time was given to discussion. Discussion is the life of a medical meeting; this was proven true at St. Paul. Another feature, which is commendable, is that of varied symposia —a symposium with discussion on a certain subject is carefully planned and the subject exhaustively treated. The result is all that is new, all that is worthy and helpful upon a certain subject is presented and thoroughly discussed.

From Medicine, July.

The St. Paul meeting of the Association has passed into history, and will be long looked upon as one of the most successful and perhaps epoch-making in the progress of the Association.

The adoption of the report on reorganization was inevitable. A very small minority opposed it, but the concensus of opinion, being so overwhelmingly in its favor, meant that it would be promptly carried when it came to a vote. It was claimed on the floor of the convention that the proposed House of Delegates was creating an undemocratic star chamber to arbitrarily govern the Association. This suggestion came from that small coterie of individuals who, in the past, have largely attended to the business of the convention and whose occupation under the

new order of things will be somewhat restricted. The creation of the House of Delegates is, in effect, enlarging the governing body and giving it a thoroughly representative character. It will relieve the general sessions of all business details, and, while they may be less picturesque, they will be more orderly.

From the St. Paul Medical Journal, July.

It was with mingled feelings of regret and relief that we witnessed the adjournment of the 52d annual meeting of the American Medical Association, which will meet next year in Saratoga. The meeting was a large one, the actual registration being eighteen hundred and ten, and there were not far from twenty-five hundred in attendance, and the body of delegates was an unusually representative one. We shall make no attempt to report the meeting in detail, as we assume that all of our readers have access to one or more of the weekly journals in which this is done much more accurately than we could do it if we attempted to. The most important event of the meeting, indeed we believe the most important event in the history of the Association, was the adoption in a modified form of the report of the Committee on Organization. We hope that every member of the Association will read carefully the plan of reorganization as it was finally adopted, and that every state and county medical society in the country will adopt the recommendations concerning membership there suggested. This matter was discussed by Dr. Wm. Davis in his address, as President of the Minnesota State Medical Society, and the Society appointed a committee to consider the matter in all its details and to report at the next annual meeting. We shall have frequent occasion to refer to this matter, and at this time we will simply say that the plan meets with our hearty approval and that we believe that it will accomplish a vast amount of good for the Association in many ways. It will, among other things, purify the politics of the Association; it cannot do away with politics, for in an association of this kind some politics are unavoidable, but with the elective power in the House of Delegates, it is not at all likely that organized cliques will come to the annual meetings with their candidates for the various offices determined upon and with a carefully arranged plan of campaign for their election. Dr. Reed was almost ideal as a presiding officer, firm, dignified, and with a perfect knowledge of parliamentary law, and his presidential address, as might be expected by those familiar with his gifted pen, was a broad, scholarly and thoughtful document, containing many helpful suggestions concerning the policy and the possibilities of the Association. It should be carefully read by those who were denied the privilege of listening to its eloquent delivery.

The Section meetings were well attended and a very large number of valuable papers were read and discussed. The Pathologic Exhibit excited much interest and a great many important subjects in pathology were represented by carefully prepared specimens and series of preparations, photographs and microscopic slides. The series of wax models representing various stages of smallpox prepared by Mr. Dahlgren, of Minneapolis, for the Pathological Laboratory of the University of Minnesota attracted much attention and was highly commended. The General Exhibits were interesting, well conducted, largely attended and satisfactory both to the exhibitors and the local committee. The hotel arrangements were admirable and we heard no complaints of uncomfortable accommodations or overcrowding. Concerning the entertainments and the social features of the meeting it is perhaps not becoming for us to speak, but we were much gratified to hear on all sides such cordial and spontaneous expressions of appreciation from our guests and we feel sure that everybody had a good time.

New Members.

The following is a list of new members of the American Medical Association for June, 1901:

ALABAMA.

Zimmerman, Albert S., Killen.
Goggans, J. A., Alexander City.
Watkins, I. L., Montgomery.

ARIZONA.

Craig, R. W., Phoenix.

ARKANSAS.

Goree, J. L., Pine Bluff.

CALIFORNIA.

Bullard, F. D., Los Angeles.
Fales, Louis Henry, San Francisco.
Bruner, Francis Marion, Santa Ana.
Caglieri, G. E., San Francisco.
Ransom, S. A., Angel Island.
LeFevre, Joseph P., San Francisco.

CONNECTICUT.

Goodenough, Edw. W., Waterbury.
Hammond, H. L., Killingly.
Kellogg, K. E., New Britain.

COLORADO.

Friedmann, A. C. H., Colorado Springs.
Phillips, C. W., Rocky Ford.

DISTRICT OF COLUMBIA.

Fisher, W. N., Washington.
Wertenbaker, C. P., Washington.

GEORGIA.

Chason, J. D., Bainbridge.
Battey, Wm. W., Augusta.

INDIANA.

Culp, L. L., Ft. Wayne.
Wardner, Horace, Laporte.
Cole, A. M., Indianapolis.

ILLINOIS.

Petersmeyer, Wm., Ashton.
Rutledge, J. A., Elgin.
Brewer, E. J., Ashton.
Rice, Delia N., Galesburg.
Chapin, H. A., White Hall.
Haliberg, C. S. N., Chicago.
Johnson, C. W., Chicago.
Swan, C. F., Chicago.
Stewart, W. T., Chicago.
Andrews, E. W., Chicago.
Goodsmith, H. M., Chicago.
McIntyre, C. J., Chicago.
Martin, F. H., Chicago.
Sanford, W. C., Chicago.
Sandberg, K. F. M., Chicago.
Stevenson, A. F., Chicago.
Stewart, H. J., Chicago.
Webster, E. M., Chicago.
James, R. L., Blue Island.
Lillie, C. W., East St. Louis.
McGowen, T. J., Palestine.
McLaughlin, W. K., Jacksonville.
Norton, F. D., Columbus.
Peyton, D. C., Jeffersonville.
Sourwine, J. D., Brazil.

IOWA.

Patterson, W. E., Greene.
Field, Geo. Alfred, Callender.
Sowles, E. E., LuVerne.
Pattison, I., Oelwein.
Ryan, G. N., Des Moines.
Saunders, C. J., Ft. Dodge.
Warren, J. N., Sioux City.
Smith, Frank S., Nevada.
Bachman, E. W. Estherville.
Chase, C. S., Waterloo.
Deering, A. B., Boone.
Dean, F. W., Council Bluffs.
Dennis, E. G., Charles City.
Downing, W. L., Moulton.
Farnsworth, H. S., Clinton.
Fuller, Z., Sac City.
Graham, J. C., La Porte City.
Hanna, J. W., Winfield.
Harding, L. W., Salon.
McLaughlin, A. J., Sioux City.
McLean, J. W., Fayette.
Pond, A. M., Webster City.
Rawls, J. A., Cresson.
Shellito, A. G., Independence.
Smith, E., Aurora.
Stevens, G. M., Decorah.
Stockman, G. C., Mason City.
Vest, F. E., Montezuma.
Herrick, S. J., Everest.
Waterman, J. C., Council Bluffs.

KANSAS.

Elmore, R. B., Osburg.
Farney, Haydee M., Mound City.
Parker, John B., Hill City.
Hunter, Randall R., Fulton.
Harkey, Wm. Cathey, Gardner.

KENTUCKY.

Smith, J. W., Clinton.
Schachner, Aug., Louisville.
Linn, C. H., Kuttawa.
Powell, W. D., Harrodsburg.
Aud, C. Z., Cecilian.
Frank, L., Louisville.
Green, J. T., Leitchfield.
McCormick, A. T., Bowling Green.

MASSACHUSETTS.

Harding, Walter A., Everett.
Gay, Wm. Fred'k, Boston.
Frame, Jos., Rockland.
Hatch, Leonard F., Lynn.
Leonard, Jr., E., Melrose.

MAINE.

Foster, B. B., Portland.

MICHIGAN.

McHench, W. J., Brighton.
Layton, Matthew A., Woodmere.
Alway, Geo. H., Gaines.
Shaw, Neilan T., Birmingham.
Seeley, Oscar F., Climax.
Warthin, Alfred S., Ann Arbor.
Ballard, W. R., Saginaw.
Bliss, J. W., Saginaw.
Godfrey, W. L., Battle Creek.
Kellogg, P. S., Battle Creek.
McLaug, J., Bay City.
Stewart, C. E., Battle Creek.
Tupper, V. L., Bay City.
West, W. K., Calumet.
Shurly, B. R., Detroit.

MINNESOTA.

Barck, G. W., Albert Lea.
Nichols, G. W., Milaca.
Freeman, J. P., Emmons.
Wing, I. C. J., Clinton.
Bouman, Hermann, Torah.
Hawkins, V. J., St. Paul.
Smith, P. Albert, Faribault.
Phillips, J. R., Northfield.
Burgan, Jas Homer, Tracy.
Mann, Arthur T., Minneapolis.
Hesselgrave, S. S., St. Paul.
Avery, J. F., Aitkin.
Wood, W. S., Geneva.
Johnson, Osa, St. Paul.
Nippert, H. T., St. Paul.
Behrens, B. M., Minneapolis.
Bjelland, A. O., Mankato.
Holbrook, J. S., Mankato.
Johnson, J. S., St. Paul.
Landenberger, John, New Prague.
McKinnon, Malcolm, Fosston.
Miller, A. W., St. Paul.
Whitcomb, E. H., St. Paul.
Morley, Wm. B., St. Paul.
Sherwood, Geo. S., Kimball.
Vittum, W. H., St. Paul.
Camp, J. L., Brainerd.
Dimmitt, F. W., Red Wing.
Jacoby, Wm., Wells.
Allen, A. W., Austin.
Adsit, A. M., Hastings.
Anderson, C. A., Rush City.
Arzt, C. P., St. Paul.
Bachman, C. E., Evansville.
Barton, G. C., Minneapolis.
Bean, C. E., St. Paul.
Boie, K. S., St. Paul.
Boot, G. W., Lamberton.
Boyd, C. A., Lewiston.
Braden, A. J., Duluth.
Bray, C. W., Biwabik.
Buckley, E. W., St. Paul.
Button, A. J., Hammond.
Burton, C. N., Elinore.
Cremer, M. H., Mazeppa.
Cox, A. J., Tyler.
Dodge, F. A., Le Sueur.
Dodge, W. M., Farmington.
Dunn, J. B., St. Cloud.
Ely, C. B., Rochester.
Franchere, F. E., St. James.
Freeman, W. W., Grand Meadow.
Fritsche, L. A., New Ulm.
Frost, E. H., Wilmar.
Gallagher, J. W. S., Winona.
Hansen, M., Hendrum.
Lichtenstein, H., Winona.
McKean, J., Montgomery.
Mayland, M. L., Faribault.
Mikkelsen, M., Wells.
O'Hara, J. J., Alma City.
Peters, R. M., Minneapolis.
Plordke, F. J., St. Paul.
Pritchard, D. B., Winona.
Randall, B. M., Graceville.
Renz, G. A., St. Paul.
Roberts, T. S., Minneapolis.
Rood, D. C., Hibbing.
Rose, F. M., Faribault.
Schoch, J. L., New Ulm.
Simpson, J. D., Minneapolis.
Schofield, C. L., Benson.
Schoonmaker, E. C., Perham.
Slocumb, J. A., Plainview.
Stoner, R. R., Winthrop.
Stover, E. E., Bigelow.
Trace, O. C., Little Falls.
Van Beeck, H. G. C., Hastings.
Waltam, G. S., Warren.
Watson, T. R., Zumbro Falls.
Williams, John, Lake Crystal.
Wood, E. S., St. Paul.
Ritchie, P., Ramsey.

MISSISSIPPI.

Ballard, J. C., Natchez.
Harris, T. A., Rosedale.

MISSOURI.

Goben, Grandison A., Kirksville.
May, Henry A., Washington.
Ralston, J. P., Sheffield.
Sawtell, J. E., Kansas City.
Gaines, J. R., Musselfork.

Townsend, Jas. A., Unionville.
Lincoln, Ben. S., Monroe City.
Fuson, Frank B., Mansfield.
Carter, Oscar Newton, Lebanon.
Fritts, J. R., Mexico.
Standly, E. D., Linneus.
Nash, G. A., Maryville.
Scott, J. N., Kansas City.
Greene, J. V., Kansas City.
Jackson, C. M., Columbia.
Long, O. M., Harrisburg.
Morton, D., St. Joseph.
Robinson, J. F., Nevada.
Wiener, M., St. Louis.
Dannaker, C. A., Kansas City.

MONTANA.

Wine, W. B., Dupuyer.
McDonald, H. J., Butte.
Spelman, J. F., Anaconda.

NEBRASKA.

Brown, Ewing, Omaha.
Hepperlen, H. M., Beatrice.
Gilmore, R. A., Omaha.
Bridges, E. L., Wausa.
Clements, G. P., Clarkson.
Haggard, J. R., Lincoln.
Henry, E. C., Omaha.

NEW JERSEY.

Carling, W. Monroe, Trenton.
Ramsay, W. E., Perth Amboy.

NEW YORK.

Byrne, Patrick J., New York City.
Bozovsky, V. D., Dunkirk.
Jack, G. N., Depew.
Houghton, H. S., New York City.
Bloodgood, D., Brooklyn.
Gumaer, A. G., Buffalo.

NORTH DAKOTA.

Currie, A. N., Hatton.
Baier, Florence C., Jamestown.
Baldwin, L. B., Jamestown.
Fiset, L. O., Grand Forks.
Gerrish, W. A., Enderlin.
McKenzie, J. D., Milnor.
Meckstroth, L. W., Wahpeton.
Pray, E. A., Valley City.
Quain, E. P., Bismarck.
Rounsvelle, A. P., Larimore.
Sifton, J. W., Jamestown.
Spottswood, C. P., Hankinson.

OHIO.

Calhoun, S. Fred'k, Cleveland.
White, D. K., Cleveland.
Barnes, Albert S., Cambridge.
Chadbourne, T. L., Galipolis.
Clark, C. R., Youngstown.
Dickson, J. A., Ashtabula.
Kimmell, J. A., Findlay.
Rathburn, D. C., Middleport.
Sylvester, J. E., Wellston.
Wagar, C. P., Toledo.
Krouse, L. J., Cincinnati.
Schwab, L., Cincinnati.

OKLAHOMA.

Love, R. D., Perry.

PENNSYLVANIA.

Newell, Mary E., Altoona.
Wadsworth, Wm. S., Philadelphia.
Myers, Rudolph, Huntingdon.
Rinard, Charles C., Homestead.
Nones, R. H., Philadelphia.
Neff, E. L., Pittsburg.
Brubaker, J. L., Altoona.
Hayes, F. M., Allegheny.
Shallenberger, H. M., Rochester.
Sheridan, J. C., Johnstown.

RHODE ISLAND.

Merriman, Alfred M., Bristol.

SOUTH DAKOTA.

Coulter, J. E., Desmet.
Cook, J. F., Langford.
Jones, J. D., Groton.
Lane, W. H., Miller.
Mallery, C. B., Aberdeen.

TENNESSEE.

Haigler, T. W., Chattanooga.
Meyer, L. L., Memphis.
Watson, Wm. T., Lexington.
Eve, Paul F., Nashville.
Hall, D. M., Memphis.
Witherington, J. B., Munford.

TEXAS.

Aronson, Emile, Dallas.
Gilbert, A. J., Hillsboro.
Gray, C. A., Bonham.
Seay, E. L., Denison.
Wilson, Robt. S., Gainesville.

VIRGINIA.

McCurdy, Neil A., Norfolk.

WASHINGTON.

Yocum, J. R., Tacoma.

WEST VIRGINIA.

Long, D. J., Piedmont.

WISCONSIN.

Buchanan, R. C., Green Bay.
Chittenden, G. C., Madison.
Conkey, C. D., West Superior.
Conger, F. G., Mondovi.
Elkinton, C. H., Eleva.
Epley, F. W., New Richmond.
Godfrey, J., Lancaster.
Head, L. A., Madison.
Hudgel, Chas R., Ladysmith.
Keenan, Geo., Madison.
Mills, N. P., Appleton.
Moyer, S. R., Monroe.
Noyes, J. C., Oshkosh.
Perrin, H. E., Star Prairie.
Philler, H., Waukesha.
Sharp, M. B., Madison.
Sperry, W. P., Phillips.
Thibodo, F. H., Green Bay.
Witte, W. C. F., Milwaukee.
Wiley, F. S., Fond du Lac.

Report on the Pathologic Exhibit of the American Medical Association at the St. Paul Meeting Held June 4 to 7, 1901.

FRANK B. WYNN, CHAIRMAN.

INDIANAPOLIS.

Many have borne appreciative testimony to the success of the first Pathologic Exhibit of the Association, inaugurated at Atlantic City a year ago. It was a wholesome digression from the monotony of commercial exhibits and appealed at once to those striving for the higher ideals in medicine. The pathologist, expert clinician and general practitioner alike found it interesting, instructive and useful. Considering the ethical and scientific spirit of the Association, official approval of the movement was a result anticipated. An appropriation was made commensurate with the importance of the work, which was to be under the supervision of the Section on Pathology and Bacteriology.

Profiting by the experience of a year ago, it was hoped for the St. Paul meeting to secure a better balanced exhibit, both in the scope and character of material presented. The difficulties in the attainment of this end were, first, to secure the promise of exhibits, and secondly, to ascertain from prospective exhibitors a list of what it was designed to contribute. In this way it was sought to obtain an approximate estimate of the quantity and character of available material. Thus, would unnecessary duplication of specimens be avoided, and the exhibit built up at weak points, giving it symmetry. In the very nature of things this was an arduous undertaking, both on the part of the Committee and those who signified a willingness to contribute. In the main the hopes and desires of the Committee have been realized. When it is remembered that the large labor necessary in the preparation and presentation of the exhibit was performed by exhibitors gratuitously, one can but marvel at the results attained. What stronger proof could be given of the unselfishness of the true scientific spirit? A corps of over fifty scientific workers, many of them eminent in the field of pathology, labored faithfully for this enterprise at home, and at the St. Paul meeting subordinated pleasure to the successful demonstration of the Pathologic Exhibit, making of it a great common school of practical pathology, for the rank and file of the profession. They merit and have won the grateful thanks and unstinted praise of the whole Association.

Although the Pathologic Exhibit is under the direction of the Section on Pathology and Physiology, it is a feature of the Association to which all Sections are related. Next to the place where the general sessions are held, the Pathologic Exhibit rooms should be the most important common meeting-place for the members of all Sections. It is, therefore, the duty of the Committee of Arrangements each year, to provide for the Pathologic Exhibit, ample space, conveniently located, well lighted, and separate and distinct from the commercial exhibits. The local committee on Pathologic Exhibit deserves thanks for securing the best available quarters at St. Paul. Unfortunately the room was not convenient of access. Consequently, the attendance at the exhibit was not what its excellence warranted.

In the summary which follows, the merest reference only is possible to exhibitors and their collections. Inadequate as the report of necessity is, it will give the reader a general idea of the great work accomplished in this practical scientific department of the Association.

A.—SOCIETIES.

Cincinnati Academy of Medicine: H. J. Whitacre.

Miscellaneous specimens 50

This well-known medical organization did credit to itself and the Queen City by sending to the exhibit this excellent collection. Particularly noteworthy was a series of specimens illustrative of prostatic hypertrophy.

Indiana State Medical Society: Frank B. Wynn, Indianapolis.

Photomicrographs of malarial blood, etc.	50
Photographs illustrative of different types of feeble-minded.	25
Series of photographs illustrative of different types of criminals	42
Gross specimens	110
Total	227

Especially interesting was the group of photomicrographs of malarial blood and bacteria by C. S. Bond; also the series of photographs representing different types of criminals, by A. L. Spinning. Among the gross specimens was shown a group of livers illustrating beautifully and typically alcoholic, syphilitic and biliary cirrhosis. There was also a fine series of brains showing cerebral hemorrhage. This Society participated in the exhibit last year and enjoys the distinction of being the pioneer in this line of society work.

Kansas State Medical Society: Geo. A. Boyd, Baldwin.

Miscellaneous collection of gross specimens 30

Most interesting and instructive in this exhibit was a collection of mosquitoes from all parts of the world, mapped to show their relationship to malaria.

Wisconsin State Medical Society: H. V. Würdemann and Gustav A. Kletzesch, Milwaukee.

Collection of eye specimens 40

This extraordinary collection of eye specimens, beautifully mounted in glycerin jelly, gave a very comprehensive view of gross pathologic conditions of the organ.

B.—COLLEGES.

Chicago Policlinic: Maximilian Herzog.

Gross specimens 30

Very interesting in this collection was a series of tubal pregnancies and several specimens of myoma complicating pregnancy.

College of Physicians and Surgeons, Chicago: W. A. Evans, W. T. Eckley and C. E. Coates.

SEMI-MOIST AND DRY SPECIMENS.

Nasal fossa and accessory sinuses	20
Antrum of Highmore	12
Dural sinuses	12
Of male and female pelves	5
Pott's fracture, tubercular spine, etc.	5
Joints	12
Male urethral	6
Brain and spinal cord	7
Pathologic skiagraphs	65
Photomicrographs	36
Miscellaneous	5

WET SPECIMENS.

Tuberculosis	20
Carcinoma	10
Gangrene	6
Uterus and ovary	16
Miscellaneous	8
Total	245

This very large and beautiful collection consisted of anatomic as well as pathologic specimens and was especially noteworthy for its superior average excellence. The semi-moist specimens exhibited outside of containers, afforded great advantages for close inspection.

McGill University, Montreal, Canada: J. G. Adami.

Miscellaneous specimens	11

Prof. Adami was not able to be present in person, but evidenced his interest in the exhibit by sending this choice collection. Very striking was the group of cerebral aneurysms.

Hamlin University, Medical Department, Minneapolis: J. F. Corbett.

Gross, dry, bone specimens	75

This beautifully mounted collection of bone specimens represented a wide range of pathologic conditions.

Medico-Chirurgical College, Philadelphia: Joseph McFarland.

Skiagraphs	26
Microscopic demonstrations	25
Total	51

The striking feature of this exhibit consisted of a series of microscopic specimens showing beautifully all the various neoplasms and other important pathologic conditions found in the mammary gland.

Northwestern University Medical School, Chicago: G. Fütterer and F. Robert Zeit.

This remarkable collection consisted of tumors grouped anatomically as follows:

A. Endothelioma of humerus with extensive metastases	6
B. Carcinoma of uterus	9
C. Primary carcinoma causing implantation in other organs	4
D Carcinoma with cells performing physiologic function like organ where found	1
E. Carcinoma of breast with many metastases	4
F. Carcinoma of gastro-intestinal tract, particularly of stomach in reference to gastric ulcer	12
G. Tumors of the mamma	5
H. Cysts of ovaries	7
I. Miscellaneous	17
Photographs accompanying the foregoing	50
Total	115

These were all Kaiserling preparations, mounted in unique oak frames with glass centers, getting rid of the refractive distortions of round jars. The entire group was instructive alike to the pathologist and practitioner.

Wisconsin College of Physicians and Surgeons, Milwaukee.

Miscellaneous gross specimens	17

Some of these were very excellent specimens.

Rush Medical College, Chicago: Ludvig Hektoen and H. G. Wells.

Jar specimens, miscellaneous	35
Bone specimens, dry	6
Group of eye specimens mounted in glycerin jelly	12
Photographs	14
Cultures of blastomycetic dermatitis	20
Books illustrating laboratory training	14
Total	101

The students' note-books which were exhibited contained many original drawings of exceptional merit, which bore eloquent testimony to the superior laboratory training received. The jar specimens were all rare. Almost without exception, they were accompanied by published reports.

University of Minnesota, Minneapolis: F. F. Wesbrook, L. B. Wilson and S. M. White.

Sets of cultures of bacteria showing method of preserving cultures for purposes of demonstration	26
Colored wax models of smallpox, chicken-pox, pemphigus, etc., made by R. E. Dahlgren from plaster impressions taken by G. D. Haggard	40
Jar preparations—miscellaneous	149
Dry bone and other specimens	18
Photographs	20
Large water colors, illustrating classification of bacillus diphtheriæ	21
Total	274

Most striking in this large and well-arranged exhibit was the beautiful set of wax models referred to above. The plan of preserving cultures for purposes of demonstration is unique, artistic and practical. The excellence of this collection was made patent by the constant presence of someone to demonstrate the specimens.

C.—HOSPITALS, MUSEUMS, ETC.

Central Indiana Hospital for Insane: George F. Edenharter and William Charles White.

Photographs illustrating different types of insanity	62
Photographs of Pathological Building and equipment of hospital	26
Gross specimens	12
Total	100

The photographs of the insane were especially fine. Noteworthy among the gross specimens was one of biliary cirrhosis arising from obstruction of the common duct by a stone.

Iowa Hospital for Insane, Independence: Gershom H. Hill and Albert M. Barrett.

Miscellaneous gross specimens	30

These were all Kaiserling preparations and accompanied by carefully prepared data, bearing excellent testimony to the pathologic work being done in the institution.

Government Hospital for Insane, Washington, D. C.: A. B. Richardson and I. W. Blackburn.

Miscellaneous gross specimens	40

This institution contributed very generously toward the success of the Atlantic City Exhibit. Although neither representative was able to be present this year, their good will toward the movement was shown in this excellent collection of gross specimens contributed. Very beautiful were those of aneurysm of the heart, hepatic, cirrhosis and prostatic hypertrophy.

Lakeside Hospital, Cleveland: W. T. Howard, Jr.

Miscellaneous gross specimens	25

This institution was very creditably represented both this and last year. Rare and instructive were the neoplasms as follows: Carcinoma with tuberculosis of cecum; primary carcinoma with cirrhosis of liver; angio-sarcoma of humerus; primary muscle cell sarcoma of uterine wall; sarcoma of both suprarenal bodies; and primary sarcoma of stomach.

St. Luke's Hospital, Richmond, Va.: Stuart McGuire.

Stone in the bladder with foreign bodies as nuclei	5

These stones were removed from the female bladder. Three were formed on hair-pins; another about a broken fragment of gum catheter, and the fifth upon a segment of a silver catheter.

St. Mary's Hospital, Rochester, Minn.: Drs. Mayo.

Miscellaneous gross collection	27

The distinctive feature of this collection was a series of pathologic appendices showing: 1. Acute appendicitis, 6 to 36 hours after primary attack. 2. Showing abscess, gangrene and foreign bodies, operation 3 to 12 hours after first attack. 3. Chronic form, operation between attacks. 4. Chronic obliterating appendicitis.

St. Peter Hospital for Insane: H. D. Valin.

Pathologic brains, dry	12
Wet specimens	8
Casts of brains	10
Photomicrographs	37
Miscellaneous	68
Total	135

This entire collection gave ample evidence of excellent work being done in this institution in the field of neuropathology.

Department of Public Health, Chicago.

Photographs of smallpox and chicken-pox	50

This was a most excellent series of photographs.

U. S. Army Medical Museum, Washington, D. C.: Col. Calvin DeWitt and Capt. A. E. Bradley.

Radiographs of gunshot fractures received by soldiers in the Spanish-American war	24
Fractures received by soldiers in the war of 1861-65, of interest by way of comparison with the radiographs. The varying effect of the different type of missile was well shown	25

Intestinal lesions of typhoid fever and dysentery..... 17
Finely mounted series of dental deformities..... 35
Plaster casts of Peruvian skulls, showing prehistoric trephining. Some of these skulls presented evidence of healing after operation 19

Total..... 120

This very fine collection, sent from the great Army Medical Museum, is evidence of the good will borne the Pathologic Exhibit by Surgeon General Sternberg and his colleagues.

U. S. Bureau of Animal Industry, Washington, D.C.: D. E. Salmon.

Tuberculosis in meat, specimens..... 50

Those who attended the Atlantic City meeting will recall the extraordinary demonstration of diseased meats which Dr. Salmon made in the Pathologic Exhibit, comprehending all the gross pathologic conditions found in Government meat inspection. For this year's Exhibit he again presented cold-storage specimens, limiting them, however, to tuberculosis in animals. This typical group, eminently interesting and instructive in itself, was rendered doubly so by its proximity to the group showing tuberculosis in the human being.

INDIVIDUALS CONTRIBUTING COLLECTIONS.

Emil Amberg, Detroit.

This was a collection of dry-bone specimens which proved extremely interesting to otologists. They were grouped as follows:

1. Series showing variation in position of lateral sinus (temporal bones) 20
2. Specimens with abnormally developed styloid process (temporal bones) 20
3. Specimens showing development of styloid process at different ages 29
4. Specimens showing topographic anatomy of ear..... 21
5. Other specimens 4

Total..... 94

Edward Boeckmann, St. Paul.

Photographs of lepers..... 14

This was an exceptionally fine series of photographs, representing the different varieties and stages of the disease.

Frederic S. Dennis, New York.

Gross specimens 100

Dr. Dennis exhibited a series of sarcomata and carcinomata involving the bones and glands. They were presented in connection with a paper read before the Section on Surgery and Anatomy, on "Treatment of Malignant Disease by Surgical Operation." The specimens were from his tabulated cases in which no recurrence has taken place.

James Nevin Hyde and Frank Hugh Montgomery, Chicago.

Photographs of blastomycetic dermatitis..... 53
Cultures of blastomycetic dermatitis..... 20

Total 73

This beautiful series of photographs was highly appreciated by all dermatologists as well as many others interested in this rare skin affection upon which these gentlemen are eminent authorities.

Leo Loeb, Chicago.

Specimens..... 20

This was a most excellent demonstration of research and experimental work, a feature of the Pathologic Exhibit which the Committee has been anxious to build up. The bodies of ten rats were exhibited, showing tumors in a series of succeeding transplantations of sarcoma of the thyroid in a rat. Drawings from microscopic sections accompanied the gross specimens.

Charles Lester Leonard.

Beautiful series of skiagraphs, showing renal and urethral calculi..... 10

Total number of specimens constituting the Pathologic exhibit.....2130

Societies.

Chicago Electro-Medical Society.—This society has been organized with Dr. Shobal V. Clevenger, president, and Dr. Gordon G. Burdick, secretary.

Northwestern University Medical School Alumni Association.—At the annual meeting of this association, Dr. William A. Mann, Chicago, was elected president, and Dr. Henry B. Hemenway, Evanston, secretary.

Panhandle (of Texas) Medical Society.—The seventh quarterly meeting of this society will be held at Amarillo, July 16 and 17, under the presidency of Dr. David R. Fey of that place.

Practitioners' Club (Jersey City, N. J.).—At the fourth annual meeting and dinner of this club, June 11, Dr. Gordon K. Dickinson, Jersey City, was elected president; Dr. Charles A. Gilchrist, Hoboken, vice-president, and Dr. George W. Shera, Jersey City, secretary and treasurer.

New York State Medical Association.—Third District Branch.—The annual meeting of this branch of the State Association was held in Ithaca, June 13 and 14. Dr. Elias Lester, Seneca Falls, was elected president; Dr. Bernard S. Moore, Syracuse, secretary, and Dr. Chauncey P. Biggs, Ithaca, treasurer.

Ulster County (N. Y.) Medical Association.—The Ulster County branch of the New York State Medical Association was organized at Kingston, June 20, with the following officers: Dr. Fred Huehne, Rondout, president; Dr. James L. Preston, Kingston, vice-president; Dr. Alice Devine, Ellenville, secretary, and Dr. Alexander A. Stern, Rondout, treasurer.

Union County (Ohio) Medical Association.—The physicians of Union County met at Marysville, June 11, and organized an association with the following officers: Dr. David W. Henderson, president; Dr. Charles McCune, of Unionville, and Alexander Smith, of Pottersburg, vice-presidents, and Dr. Stanley J. Bowen, of Claiborne, secretary and treasurer.

Northern Aroostook (Maine) Medical and Surgical Society.—The annual meeting of this society was held at Caribou, June 11. The following officers were elected: Dr. Herbert F. Kalloch, Fort Fairfield, president; Drs. Charles E. Dow, of Mapleton, and E. H. Doble, of Presque Isle, vice-presidents; Dr. Jefferson F. Cary, Caribou, treasurer, and Dr. W. G. Chamberlain, Fort Fairfield, secretary. The next meeting will be held in September at Presque Isle.

Washington State Medical Society.—The twelfth annual meeting of this society was held at Seattle, June 18, 19 and 20. A committee was appointed to devise a common form of constitution for the various county medical societies throughout the state. The election of officers resulted as follows: Dr. John W. Bean, Ellensburg, president; Drs. Henry B. Luhn, of Spokane, and Frantz H. Coe, of Seattle, vice-presidents; Dr. James B. Eagleson, Seattle, treasurer, and Dr. Arthur H. Coe, Spokane, secretary. Tacoma was selected as the meeting-place for 1902.

New Jersey State Medical Society.—The 135th annual meeting of this society was held at Deal Beach, June 25-27. Acting President Dr. John D. McGill, Jersey City, in the chair. The following officers were elected: Dr. John D. McGill, Jersey City, president; Drs. E. L. B. Godfrey, of Camden, Henry Mitchell, of Asbury Park, and Addison W. Taylor, of Beverly, vice-presidents; Dr. Ellis W. Hedges, Plainfield, corresponding secretary; Dr. William J. Chandler, South Orange, recording secretary, and Dr. Archibald Mercer, Newark, treasurer. The next meeting will be held at Atlantic City.

Wisconsin State Medical Societies.—A joint meeting of the Wisconsin State Medical Society, Wisconsin State Eclectic Medical Society and Homeopathic Medical Society of the State of Wisconsin was held in Waukesha, June 26. Dr. William H. Washburn, Milwaukee, representing the regular school, delivered an address on "The State Control of the Practice of Medicine;" Dr. J. V. Stevens, Jefferson, representing the eclectic school, spoke on "The Sanitation and Public Control of Charitable Institutions," and Dr. Quincy O. Sutherland, representing the homeopathic school, addressed the convention on "The National Control of the Practice of Medicine."

Colorado State Medical Society.—The annual meeting of this society was held June 18, 19 and 20, at Denver. Dr. Wil-

liam P. Munn, Denver, presiding. In his address he advocated a school of instruction for the training of health officers. He said that physicians did not advocate vaccination for commercial benefits because it would be more profitable financially to the physician to let smallpox attack as many patients as possible. The following officers were elected: Dr. Richard W. Corwin, Pueblo, president; Drs. William W. Grant, of Denver, P. J. McHugh, of Fort Collins and Z. J. Forhan, of Trinidad, vice-presidents; Dr. James M. Blaine, Denver, corresponding secretary; Dr. Minnie C. T. Love, Denver, recording secretary, and Dr. William J. Rothwell, Denver, treasurer. The 1902 meeting will be held in Pueblo.

CHICAGO SOCIETY OF INTERNAL MEDICINE.

Annual Meeting, June 27, 1901.

The president, Dr. John A. Robison, in the Chair.

Causation, Effects, Prophylaxis and Management of Biliary Calculi.

DR. I. N. DANFORTH said that the most common cause of biliary calculi was a catarrhal inflammation of the gall ducts. He detailed a case, the wife of a minister, who thought she was going to die of cancer of the liver. She presented no symptoms of that disease, but her case was clearly one of inflammation of the liver with subacute nephritis of several years duration. Patient manifested all the symptoms of gallstones. He operated and found stones in the hepatic duct, not in the gall bladder. Patient died a short time after the operation. Post-mortem examination disclosed considerable enlargement of the liver, and the ramifications of the gall ducts were filled with a thick, tenacious mucus, precipitated crystals of salts, and a number of small calculi.

He reported another case which came under his observation ten years ago, in which a diagnosis of floating kidney was made. The patient was sent to him for operation. He operated, expecting to find a floating kidney, but when he reached the position where the kidney ought to be, he found it was not the kidney at fault, but a floating liver. He evacuated a pint or more of thickened bile. Four gallstones were found in the common duct and removed. A biliary fistula followed the operation, so that bile escaped through it for a month or more afterwards, but the fistula gradually closed up, and the patient recovered, with the exception that she had an enlarged or hypertrophied liver, and had occasionally bilious attacks, during which time there was more or less tenderness over the liver. This case of gallstones had its inception in a chronic catarrhal inflammation of the gall ducts.

DR. M. L. GOODKIND thought that catarrhal conditions of the gastro-intestinal tract were predisposing factors in producing gallstones, constituting a suitable soil for the development of organisms within the bowel. The colon bacillus was not infrequently found in the gall bladder as a direct cause, the catarrhal condition simply operating as a predisposing factor. It was found after typhoid fever. He had had several cases operated on in which there seemed to be a direct history following typhoid fever. He had seen three or four cases of gallstones at the Michael Reese Hospital which were directly due to mitral stenosis. In an English text-book mitral stenosis was mentioned as a frequent cause of gallstones, the statistics given by Gibson being that gallstones occurred in about 6 per cent. of all women, and in from 20 to 26 per cent. of all men, having mitral stenosis.

Another condition which was frequently associated with gallstones, is Glenard's disease of enteroptosis and gastroptosis, but whether that was due to the same cause that brought on gallstones, as tight lacing and debility, or whether it was a direct cause, he did not know.

Prophylaxis consisted in keeping the gastro-intestinal tract in as good condition as possible during the acute infectious diseases, particularly those that manifested themselves in the intestinal tract. The diet should be carefully watched. People predisposed to mitral stenosis should pay attention to the action of the liver: to the action of the intestinal canal. The bowels should be flushed for a month or so after an infectious disease, such as typhoid fever, particularly where constipation existed, by the occasional use of phosphate of soda, intestinal antiseptics, benzoate of soda and salicylate of soda being preferred by most authorities.

His own experience, in the management of biliary calculi, had been favorable to medical treatment. He had gone through the Carlsbad treatment of his patients, using phosphate of soda, rhubarb, etc. In the management of biliary calculi during the attack, to relieve pain he had resorted to Hoffman's drops, hot fomentations, and various external remedies, but had never found them successful. He had relied, during the attack, on whiffs of chloroform.

DR. LISTON H. MONTGOMERY referred to the surgical treatment of biliary calculi and spoke of cholecystotomy, saying that this operation was first proposed in 1733. At that time the operation was considered feasible by French, German, and English surgeons.

DR. EDWARD F. WELLS stated that the first recorded operation for galistones, deliberately undertaken, was made by Bobbs, of Indianapolis, Ind., some time before 1870. A few years after that, and before Dr. Bartholow operated, Dr. Marion Sims advocated strongly and operated for gallstones. He remembered the circumstances particularly, for the reason that in the year 1876 his attention was called to an article published in the *Boston Medical and Surgical Journal*, by a Baltimore physician, entitled, "A Medical Reclamation from Surgery in the Treatment of Gallstones." In this article choloroform was advocated as an internal remedy. Cholecystotomy had already been established in medical practice previous to 1876. He had prescribed chloroform from the time he read the article referred to to the present day. If chloroform was any benefit in the treatment of gallstones, it acted as a solvent of them. But it might be beneficial in other ways. It might promote secretion of bile; it might promote fluidity of the bile and prevent the formation of gallstones. He believed chloroform was a very useful agent. He was positive that his patients were not mistaken about the benefits which they had derived from taking chloroform for a long period. One of his patients had taken it week after week, and month after month for 15 years, and he did not think patients would continue any one remedy any such length of time as he had seen patients do with chloroform without believing they had received benefit from it. Gallstone colic, from which patients suffered, might be due to a single stone which was dislodged, and the patient might take chloroform or anything else and not have another attack. A patient might have an attack of gallstone colic and never have another, so that because apparent benefit had been derived, it did not follow that real benefit had accrued. The remedy was certainly a harmless one, and he still prescribed it. He gave it in from 10 to 20 drop doses, three times a day, in cream or syrup. Patients were able to take it indefinitely, and after taking it for a year or so they would ask if there was any harm in continuing it, and, if not, they would continue to use it. In answer to the question whether there was any danger of patients acquiring the chloroform habit, Dr. Wells replied that he did not think so, and again called attention to the case of the man who had taken it for fifteen years.

Recently he had a patient who was taken ill with severe abdominal pain, followed by nausea and vomiting. He saw him the next morning, at which time the patient placed his hand in the lower part of the abdomen on the right side above Poupart's ligament. This region was very tender. Temperature was 101; pulse moderately accelerated. He made a probable diagnosis of appendicitis. A blood count was made showing moderate leucocytosis. No uranalysis was made, and there was no bile present in the urine. There was no jaundice. At the end of three days he was free from pain and fever, although the slight tenderness in the region referred to continued. On the fourth day patient went to his place of business in Hammond, walked a considerable distance, returned home not feeling so well. The next morning, at 4:30, he was seized with excruciating pain in the abdomen. The speaker was sent for. He found the man rolling in bed on his hands

and occupying every imaginable position on account of agonizing pain. The pain had returned and was of the same character as that from which he had suffered four or five days before. He said to himself that no man with appendicitis was going to roll on the bed and get on his hands and knees, while a man with gallstone colic might do so. Here was a diagnostic point of value. It was easy to conclude as to the nature of the affection. Pain and tenderness in the lower portion of the abdomen returned, and in fact tenderness had never disappeared. Fever recurred. The pulse became accelerated. Patient vomited once or twice, but had no jaundice, no bile in the urine. The gall bladder was opened, and a number of gallstones removed. At a secondary operation a number of very large gallstones were removed, probably twenty large ones, and a large number of small ones. An unusual feature in this case was a localized peritonitis occupying the right half of the abdomen, extending down as far as the iliac fossa and nearly to the median line, spread out almost as large as the hand, containing a considerable amount of flocculent serum. It was walled off from the general abdominal cavity, and did not contain bile, although the gall bladder lay in immediate juxtaposition to this.

DR. GEORGE W. WEBSTER directed attention to a number of points in regard to the symptomatology. He said we should distinguish carefully between those cases in which there was a stone or multiple stones in the common duct, and those in which there was obstruction due to stones or a stone in the cystic duct. The symptomatology in both of these cases was rather characteristic, and each one furnished peculiar clinical features that were of interest and served to distinguish readily one from the other. In those cases in which there was a stone in the common duct, particularly a movable stone, having the ball-valve action first described by Osler, we might have two sets of symptoms. The blood-pressure in the portal vein was the lowest perhaps of any vein in the body. There were three other veins spreading out from this through which collateral circulation might be established where there was increased pressure in the portal vein. For example, the inferior hemorrhoidal, the superior epigastric and the azygos veins were the ones to which he referred. When for any cause there was increased obstruction in the liver, therefore diminished celerity of flow of blood in the liver, this led to increased pressure in the portal vein. This would immediately cause a diversion of a part of the blood stream which should pass through the liver through the collateral circulation, and we had symptoms due to substances, such as the products of proteid digestion, peptone, and the like, in the blood, with extreme lowering of blood tension, mental depression, and other symptoms which were characteristic of toxemia merely due to a normal blood stream which should have these substances removed by passing through the liver. In other words, we had symptoms similar to those which snake poisoning would produce if injected into the systemic circulation without passing through the portal vein. We had added to that certain causes in which there was real infection. There might be symptoms of infection, and oftentimes added to both of these there might be a picture of cholemia. The clinical picture was a composite one. If we interpreted the symptoms rightly, in the majority of cases we could tell whether there was merely a cholemia, an obstruction of the portal circulation, or a more extensive obstruction in that region. For example, it was known that the circulatory activity of the liver depended largely on the chemistry of digestion. Where there was alcoholic gastritis, or gastritis from any other cause, we would have increased activity of the liver due to the increased chemical activity of the digestive organs. This led to increased pressure in the liver, increased pressure in the portal circulation, and we had this diversion of the blood from the collateral channels, and the symptoms found under those circumstances were due to the influence of the blood, which should have passed through the liver, being diverted and acting on a susceptible nervous system.

In regard to the treatment, he was long ago convinced that there was only one treatment, namely, a surgical operation. If the patient could not be relieved by medicinal means, the physicians should refer him to a surgeon.

DR. LISTON H. MONTGOMERY asked in regard to treating biliary calculi with large doses of olive oil. In a few instances he had used sweet oil with great benefit. He hardly knew whether the oil was a solvent or whether it assisted the passage of the stones on through the ducts into the intestine.

DR. GOODKIND said that he had used it, but without good results.

DR. GOODKIND said that he had yet to see the first case of genuine gallstones that had been cured by olive oil either given by the mouth or per rectum.

DR. WELLS said that surgical treatment was the proper method of managing gallstones. However, neither medical nor surgical treatment alone was the best and proper management for every case. It was within the experience of every member of the Society to have had patients who had had attacks of gallstone colic and who, through many years, had never had another attack. Gall bladders had been opened post-mortem, with but a single gallstone present, or but few or no gallstones present in cases in which gallstones had been diagnosed. If a patient recovered from an attack of biliary colic, and was in good health, he did not think he or she should be operated on. It was well to keep such patients under observation, and if frequent attacks of biliary colic occurred, then they should be operated.

DR. JOHN A. ROBISON said that the frequency with which gallstones followed typhoid fever called to his mind an interesting case which he saw in the Presbyterian Hospital. The patient had had an attack of typhoid fever ten years previously. Dr. Bevan operated and found a number of gallstones; also a suppurative cholangitis. A test was made and the Widal reaction was very prompt.

He saw Dr. Fenger also examine a case in his clinic, which was supposed to be one of appendicitis, and diagnosed as such by two or three good surgeons. Dr. Fenger was inclined to think that the diagnosis was correct, but expressed some doubt to the class as to whether the case was really one of appendicitis or of gallstones. He opened in the region of the gall-bladder first. On reaching the gall-bladder, he readily discovered the gallstones, removed them, and the patient got well.

As regards the administration of olive oil, he had used it frequently with no results. In fact, in one case he believed it was the cause of death. The patient was 50 years of age, and had previously been operated on by the late Dr. Parkes for renal calculus. The calculus was removed, a fistula resulted, and did not close. Shortly after the operation for the removal of renal calculus, the woman developed symptoms of biliary calculi. She had frequent attacks of biliary colic, and the speaker was called to see her one night during one of the attacks. He called in a surgeon, as he thought the case was urgent, who advised immediate operation. The family were loth to consent to operation. A physician was called and placed the woman on the olive oil treatment. In less than four weeks afterwards the woman went into collapse and died. Post-mortem examination disclosed a very large gallstone imbedded in the common duct, which had ulcerated its way through the outer and middle coats of the cystic artery. If the patient had been operated on at the time he thought she would have been relieved.

JOHNS HOPKINS HOSPITAL MEDICAL SOCIETY.

Dr William H. Welch in the Chair.

Splenomegaly.

PROF. WM. OSLER showed a case of splenomegaly associated with cirrhosis of the liver, in a young man who has been a beer-drinker. He has had occasional attacks of jaundice since early life. Such tumors are often removed for ovarian tumors. The three earliest cases of splenectomy were done by gynecologists. Several other cases were referred to by Dr. Osler, as 1, lasted eight or ten years, and patient recovered completely; 2, spleen was removed, and patient did well for more than a week, then had recurrence of his frequent attacks of hemor-

rhage, with fatal result; 3, had nearly bled to death on four or five occasions; died from uncontrollable hemorrhage a few minutes after being taken from the operating table.

Scurvy.

This was in a white man accompanied with subcutaneous hemorrhage of the thigh, which was in a scleremic or sclerotic condition. The patient had come in with hemorrhages, swollen gums and enlarged knee. On aspirating the latter a bloody fluid was obtained. There were remains of a purpuric rash. It is an unusual condition which has been described by Russian physicians. A good deal of scurvy comes into the hospital from the large number of foreign immigrants, especially Hungarians and Poles.

Cystitis—Peculiar Condition of Uterus in Pregnancy.

DR. HOWARD A. KELLY spoke of drainage in bad cases of cystitis. Here attempts to wash out will be cut short on account of the pain. Dr. Kelly treats such cases by placing the patient in the knee-breast position and letting air into the bladder through the cystoscope. He then thrusts in a narrow-bladed, specially made knife, set at an angle with the handle, and draws it downward towards the urethra, leaving a free opening into the bladder for escape of urine. Dr. Kelly urged the importance of making topical examination of the bladder before commencing treatment in cases of apparent cystitis. He had had cases which had been treated elsewhere for a length of time for cystitis when on using the cystoscope a stone was seen, and in its removal the symptoms disappeared. He spoke also of peculiar cases of pregnancy which he does not understand. One part of the uterus softens down and the rest remains rigid; the softened part may bulge. In his case it was mostly towards the patient's right. The patient was the wife of a physician from Iowa. He was advised to let it alone and returned home, where his wife had a normal labor. In another case, the wife of an army surgeon, the abdomen was opened and the right upper horn of the uterus found to be softened. The patient later aborted per vias noturales. In a third case exactly the same condition was found. Dr. Kelly would call it "Apical pregnancy," and it is liable to be mistaken for extrauterine pregnancy.

Experience with an Epidemic of Smallpox.

DR. OTLEY J. PORTER, of Columbia, Tenn., described an epidemic that has recently prevailed in that section of Tennessee in which he lives. For a time the diagnosis was in dispute, some regarding it as chicken-pox, others as a new sort of eruption, "the bumps," and a few diagnosticating true smallpox. Meanwhile, in the uncertainty there was no efficient action or isolation, and the disease spread until there were 1000 cases. Dr. Porter exhibited casts of the eruption and threw pictures on the screen, showing that the disease differed in no way from the smallpox of the text-books, there being cases of hemorrhagic, confluent, semi-confluent and discrete smallpox, as in other epidemics. The mortality also was the same, all the hemorrhagic cases (5 or 6) dying; 40 per cent. of the confluent, and 10 to 15 per cent. of the discrete. Old persons over 75, pregnant women and infants under 12 months are usually exempted from the need of vaccination, but none need it more than these persons. In the 1000 cases there were some 15 of the disease in the fetus *in utero*, several of which Dr. Porter had himself delivered.

DR. SMITH, of Minneapolis, spoke of an epidemic of 600 cases in that city. Fifty cases had occurred before the existence of smallpox was acknowledged by the authorities. The fatality was small. Of the 6 cases in pregnant women, all aborted and died. Many who were vaccinated took vaccinia. Less than 2 per cent. showed a scar.

DR. OSLER said that the present widespread epidemic was evidently one of exceptional mildness, but it is a mistake to suppose that discrete epidemics are rare; Sydenham describes them.

DR. PORTER said the idea of an "attenuated" organism was not borne out by the facts, for example these cases of hemorrhagic, confluent and discrete form, all originated from the same case.

STATE MEDICAL SOCIETY OF WISCONSIN.

The fifty-fifth annual meeting held at Waukesha, June 26, 27 and 28, 1901.

The president, Dr. J. F. Pritchard, of Manitowoc, in the chair.

Serotherapy.

DR. J. F. PEMBER, of Janesville, said that the mortality in all cases of tetanus treated without tetanus antitoxin is 60 per cent., as against 30 per cent. for all cases treated with it. The serum treatment in cholera and plague is practically without data. The treatment of rabies by the Pasteur method results in an enormously lessened mortality.

The treatment of plague by scrotherapy has not shown results warranting any conclusion. The antipneumonia serum promises much. No very useful results have been reached in the serum treatment of tuberculosis. Antispirochetic serum has shortened the disease some days in the treatment of relapsing fever. Serum treatment in malignant endocarditis promises much. The treatment of snake bites by antivenomous serum is largely in its experimental stage. In cases of streptococcus infection the serum treatment has shown some good results. But the antitoxin treatment of diphtheria has won for itself the right to be regarded as a specific. Bayeux's tables, based on an analysis of 200,000 cases, give 55 per cent. as the death-rate before the advent of antitoxin and 16 per cent. since its use, with not a single death due to the antitoxin. The American Pediatric Society's table shows that where antitoxin is injected the first day of the disease the mortality is 6.6 per cent., the second day 8.3, the third 12.9, the fourth 17, and the fifth 23.2 per cent. The writer made the bold statement that the piosonous dose of antitoxin has not been found and that in the near future physicians will adopt heroic measures in desperate cases and give enormously large doses.

Chorea.

DR. H. B. FAVILL, of Chicago, read a paper on chorea, with special reference to its relationship with rheumatism and heart disease. He called attention to the fact that the problem was an obscure one. The word functional is frequently misused. It really is an expression of one of two views, either describing a reaction whose structural basis is unknown or as implying the possibility of resistance to morbid influence without permanent organic change. Endocarditis is really rheumatism and not a sequela of it, and is essentially the rheumatism of the young; the evidence is accumulating that rheumatism is a septic process. The probable conclusion is that endocarditis, chorea and arthritis are coördinate manifestations of diseased conditions peculiar to the young, in that order, and that an important element in the causation is infection.

Conjunctivitis, Keratitis and Iritis.

DR. G. V. MEARS, of Fond du Lac, read a paper on differential diagnosis and treatment of conjunctivitis, keratitis and iritis. He treated the matter from the standpoint of the general practitioner. Ophthalmia of the newborn especially must come under the treatment of the general practitioner and he should be able to make a differential diagnosis, but a good rule is when in doubt call a specialist, and in fact the general practitioner should not, unless compelled to do so, treat important affections of the eye.

Bright's Disease and Diabetes Mellitus.

DR. A. J. HODGSON, of Waukesha, read a paper on clinical points in Bright's disease and diabetes mellitus. He suggested a bread made of 20 per cent. nut-meats with 80 per cent. pulverized bran, sweet milk, baking powder, a little butter and egg. Bake in the form of gems. The so-called gluten flour is usually a fraud. It is only a cheap quality of flour which the mills are glad to get rid of at any price. Drugs are of little benefit. Codein will not cure. As to Bright's disease, the point is to get the whole system in good order, aside from the kidneys. Then the kidneys will soon come into line. It is especially important to keep the urine bland, which may be accomplished by the use of proper waters.

Fractures of the Femur.

DR. F. J. FORD, of Omro, read a paper on the subject of fractures of the middle and upper third of the femur. Results show that functionally useful limbs are not obtained in more than 16 per cent. of cases, while perfect results are almost never obtained.

Neurasthenia.

DR. J. H. MCBRIDE, of Pasadena, California, read a paper on "Some points in the management of the neurasthenic." The writer emphasized the importance of the physician getting hold of the mentality of his patient and always bearing in mind that these patients are people who need to be recreated in character and habits of mind and body.

DR. HAROLD N. MOYER, of Chicago, said that hysteria, neurasthenia and hypochondria must not be confounded. Hypochondria is simply a delusion of illness while hysteria and neurasthenia are true diseases. In neurasthenia the fatigue symptom is crucial. It is very important to obtain mental control of the patient.

Reorganization.

The President in his Annual Address strongly urged the adoption of a new constitution of reorganization of the Society, following in line with the American Medical Association, and making the unit the county or local medical association. Under this plan, he said, the profession of the state presents an unbroken front which secures the greatest possible good to the community and makes quackery almost impossible. Under the plan presented the business of the Society is done by delegates who have charge of all matters except the scientific program. The members of this House of Delegates are ineligible to office, which puts the working part of the Association out of politics.

The President recommended for immediate action, 1, that three or more members of the Society be elected to act as a reorganization committee with full powers to make such changes as may be necessary in the constitution and by-laws of this Society, to conform to the plan of reorganization of the American Medical Association, their report to be ready for adoption at the next annual meeting of this Society. This recommendation was adopted. The reorganization committee named is as follows: Dr. J. F. Pritchard, of Manitowoc, Dr. W. B. Hill, of Milwaukee, and Dr. G. V. Mears, of Fond du Lac; 2, to elect delegates at this session to comply with the requirements for representation in the House of Delegates of the American Medical Association. This was done on the following Friday.

Nervous Diseases Following Injuries.

DR. T. W. NUZUM, of Brodhead, presented the results of numerous experiments and concluded that slight injuries may produce severe spinal neuroses; that bodily injury is often less important than the fright element; that the majority of cases against great corporations are either feigned or exaggerated; that it is the duty of the expert witness to determine the existence of actual disease and its character, whether simply neurasthenia, severe hysteria, or organic lesion; that prognosis is usually good; that traumatic hysteria is intractable; that death may result where no physical lesion can be demonstrated; that traumatism may cause locomotor ataxia, epilepsy, apoplexy or paralysis agitans. Many of the cases, however, are due to suggestion.

Address in Medicine.

DR. GEORGE M. GOULD, of Philadelphia, delivered the annual address in medicine on the relation between sin and disease. He said that the unvarying concomitant of civilization was syphilization. It is claimed that 50 per cent. of wives' sterility is due to the husbands' gonorrhea. The licensing of evil is the lessening of evil. The annual drink bill of the United States is $1,059,000,000. The chief cause of crime is alcohol. The Royal Commission of Scotland attributes 72 per cent. of all crime directly or indirectly to alcohol. Prohibition breeds intemperance and is a hypocritical failure. In prohibition Vermont 3,000,000 doses of opium were demanded last year. The diseases caused in whole or in part by sin are in this order: syphilis, gonorrhea, alcoholism, abortion, tabes, insanity, hysteria, etc. Deaths caused in whole or in part by sin are found to be in this order: suicide, homicide, syphilis, gonorrhea, war, famine, pestilence alcoholism, etc. The horror of the crimes of the civilized soldiery in China is unknown. Thirty to forty per cent. of blindness is due to gonorrhea. Pneumonia is now killing more of our citizens than pulmonary tuberculosis. Nearly one-half of our mortality is due to disease of the lungs and 75 per cent. of this mortality is preventable. The average length of life in the 16th century was between 18 and 20 years. To-day it is over 40 years. In the last 20 years it has been lengthened by six years. Our toleration of anti-vaccinationists, Eddyism and Dowieism is to be paid for in millions of lives. Only one out of three thousand millionaires cares a fig for the prevention of disease. All honor to the one! Three billion dollars is the loss to the American people by preventable deaths each year. These figures warrant a demand for the establishment of a National Bureau of Health with a cabinet officer at its head. Such a bureau would easily save a thousand times its expense. Of course, it is the saving in life and suffering that is aimed at, but the figures are given to bring the matter home to your imaginations.

Causes of Sudden Death.

DR. J. M. BEFFEL, of Milwaukee, said that the subject is important. Post-mortems should always be had and physicians should be careful in giving death certificates. The Doctor reviewed a statistical record of 100 cases of sudden death which occurred in Milwaukee during the past three years. Alcohol is a very important factor in sudden death. Forty-seven cases of the 100 were due to diseased condition of the vascular system. The kidneys were diseased in 22 cases, the lungs in 18, the liver in 9. There were three classes of sudden deaths due, 1, to diseases of the vascular system; 2, to general intoxication, such as diseases of the lungs, liver and kidneys, and 3, rupture of blood vessels within the brain.

Address in Surgery.

DR. JOHN B. DEAVER, of Philadelphia, presented the annual address on the subject of "The atypical and unusual varieties of appendicitis and their management." He said, there are three cardinal symptoms of diagnosis, pain, tenderness and rigidity. Many cases are difficult of differential diagnosis, especially chronic cases, but the treatment of this disease is essentially operative, and the earlier the operation the better. Indigestion and biliousness are frequently attributable to appendicitis. The importance of a careful history of the case can not be exaggerated.

Cervical and Perineal Lacerations.

DR. W. E. GROUND, of West Superior, said that nearly all of the diseases occurring during labor follow in the wake of the midwife. Dr. Harris' operation is the coming one. Repair perineal lacerations immediately, except deep-seated lacerations of the cervix, where repair should be postponed for some time in order to avoid sepsis.

Acute Pain in Abdominal Disease.

DR. A. J. BURGESS, of Milwaukee, read a paper on the diagnostic importance and significance of acute pain in abdominal disease. He emphasized the importance of prompt action in cases where pain in the abdominal cavity is accompanied by rigidity, or even shock without rigidity. Dr. Burgess insisted on the importance of immediate operation where a man has all the symptoms of a grave abdominal disease.

Earache.

DR. G. A. HEIDNER, of West Bend, read a paper on the subject of earache, its significance and remedy, discussing the most important causes of earache, viz., trouble in the external canal, and trouble behind the drum-head. He opposed paracentesis by the general practitioner in children under 10 years of age.

Cleft Palate.

DR. GEORGE V. I. BROWN, of Milwaukee, read a paper on the subject of surgical treatment of cleft palate and proposed what is in many respects a new operation, which he has suc-

cessfully performed in many cases. He said the most important point in the diagnosis was to make a proper classification of cases. DR. B. G. MAERCKLEIN of Milwaukee said that Dr. Garretson of Philadelphia first called attention to the fact that the bones in infants were so soft that they could be strung into apposition.

Syphilis of the Nose and Throat.

DR. HENRY B. HITZ, of Milwaukee, urged that the profession do not neglect a careful and frequent examination of the nose and throat. If the patient complains of nasal discomfort, obstruction or discharge, or of any symptoms referable to the throat and vocal organs, find out the cause if possible. If after examination you are still in doubt as to the specific character of the lesion, put your patient on a rigorous specific treatment —preferably a mixed treatment—which will clear up your doubts in short order, and without the possible mutilating results of delay.

Commissions in Medicine.

DR. CARL L. FELD, of Watertown, read a paper on commissions in medicine from a moral and medicolegal standpoint. It was stated in the discussion of the paper that there was very little trouble of the kind in Wisconsin. That the matter was gradually righting itself, and that the proper principle to apply was to determine whether or not there was collusion between the general practitioner and the specialist.

Milwaukee was chosen as the place of the next meeting. The officers for the ensuing year are as follows: President, W. H. Neilson of Milwaukee; first vice-president, A. J. Hodgson of Waukesha; second vice-president, L. H. Pelton of Waupaca; secretary, Charles S. Sheldon of Madison; treasurer, Sidney S. Hall of Ripon; censors, F. E. Walbridge of Milwaukee, H. Reineking of Sheboygan, and George M. Steele of Oshkosh.

Delegate to the council of the AMERICAN MEDICAL ASSOCIATION for three years, W. T. Sarles of Sparta; alternate, Herman Gasser of Platteville; for one year, J. R. Barnet of Neenah; alternate, Byron M. Caples, of Waukesha.

CINCINNATI ACADEMY OF MEDICINE.

Regular Meeting, held June 10, 1901.

The president, Dr. N. P. Dandridge, in the chair.

Use and Abuse of Digitalis.

DR. ROBERT INGRAM went fully into the discussion of the properties of the drug, its various active principles, and the therapeutic indications. He was followed by Dr. Frank Scheerer, who gave a detailed account of several cases illustrating the various organic valvular diseases which had been materially benefited by the judicious administration of digitalis.

DR. L. A. MOLONEY said that while an interne in the Cincinnati Hospital, a patient had fallen suddenly to the floor. He happened to be in the ward at the time and on examination found the heart's action had almost ceased. He had immediately given a hypodermic injection of 1/30 grain of digitalin, and had repeated the dose in a few minutes. After the first injection there had been a slight fluttering of the heart, but after a few seconds the action of the heart was found to be more regular. Within half an hour after the last injection the patient was able to move about the ward. Recently he had had occasion to use digitalin on a patient afflicted with a severe diarrhea. The dose in this instance was 1/50 of a grain, and the result was all that could be desired.

DR. WILLIAM H. MUHLBERG was inclined to think that digitalin was entirely inert, and gave an experiment in which he had used the drug on a rabbit with negative results; with the tincture of digitalis there resulted a marked increase of the heart's action and contraction of the peripheral vessels.

DR. S. P. KRAMER was inclined to think that this positive reaction with the tincture was due to the alcohol contained in the tincture.

DR. MUHLBERG promised to repeat the experiment and report to the Academy the week following. He made the following report at the regular meeting of the Academy June 17: "I made the statement last Monday night that I had experimented with some specimens of digitalin and found them absolutely inert, while from a specimen of tincture of digitalis I obtained a distinct rise of blood pressure in a very short time. One of the gentlemen present, in a very able criticism, stated that he did not think that the results obtained from the tincture of digitalis were due to the digitalis, but to the alcohol in the preparation, for the reason that it required in the neighborhood of twenty-four hours to get the characteristic effects of the drug digitalis. I thought his criticism a very fair one and promised to repeat the experiment with digitalis and report later. I obtained some of Merck's digitalin and made a 1 per cent. solution. I then injected 10 gtt. of this solution and waited some thirty minutes, but did not obtain any reaction. I then injected some infusion of digitalis into the jugular vein and obtained a rise of blood pressure during the first eight or ten beats of the heart immediately succeeding. On the tracing which I will pass around, you will see one line, which is the line of atmospheric pressure, the larger and more distinct line indicates the blood-pressure line. The heart beat was not markedly slowed until after twenty beats. I think the rise in blood pressure is due to the effect of the drug upon the vasomotor system rather than due to the effect of the drug on the heart itself. The blood-pressure remained up in his experiment about thirty minutes. After killing the animal, I found a typical digitalis heart. The systole was a powerful one, and the heart beat very slowly. I am inclined to think with Dr. Kramer that digitalis does not act on the heart for some time after it is given, but the rise in blood-pressure occurs very shortly after the drug is given, this being due to the effect on the vasomotor system.

DR. J. L. CLEVELAND thought that in many cases of heart disease, with congested livers and lungs, the results claimed for digitalis were due in great part to the judicious use of dietetic and hygienic measures. He called attention to the fact that digitalis is often abused and given as soon as a bruit is discovered, when there is really no indication for the exhibition of the drug whatsoever. He did not question the great value of the drug when compensation had been ruptured. He thought that digitalis should be used with great caution when there was a secondary kidney involvement, and especially where the heart was hypertrophied and the arterial tension high; under these circumstances the drug should be put off as long as possible, and when finally administered, should be given in conjunction with some drug as nitroglycerin, which has a tendency to dilate the peripheral vessels and thus lower arterial tone.

DR. R. B. HALL testified as to the value of Merck's digitalin in heart-failure after abdominal sections, especially where the operation has to be performed on women the subjects of valvular disease of the heart. He wanted to insist that the dose should be as large as 1/20 to 1/15 of a grain and repeated every three or four hours.

DR. G. A. FACKLER thought that the discussion of digitalis should take more the line of personal experience, as at the present time every practitioner can testify as to its value in selected cases. Personally he thought that when compensation was ruptured, no matter what valve was affected, digitalis was indicated. He preferred a reliable tincture, given in doses of from 20 to 30 drops every two to four hours, as indicated by the clinical symptoms. He was no believer in the accumulative action of the drug, so-called, had never seen a case, and on inquiry among a number of his colleagues, had never heard of a case. He had no doubt that a poisonous action could be exerted if the drug were irrationally administered; but digitalis was not peculiar in that regard; all drugs would act in this matter.

DR. ALFRED FRIEDLANDER did not agree that the tincture was the only reliable preparation of digitalis. He had obtained good results from the digitalin of Merck and from the fluid extract of Squibb administered hypodermically in one minim doses.

DR. E. W. MITCHELL also testified as to the value of the fluid extract and digitalin. Some months ago he had had occasion to use as much as 1/5 of a grain of digitalin (Merck) in divided doses during the course of an hour's time with the happiest results. He was inclined to think that the infusion of digitalis made by a reliable house gave as satisfactory results as any.

DR. W. E. KIELY said that as digitalin did not represent the active principle of digitalis, it could not be expected to give the same therapeutic results. He used for the most part a reliable tincture. He did not see why the fluid extract should be superior to the tincture, as the only difference between the two preparations was one of strength. The best results could be obtained from the tincture that is made from the infusion.

COLORADO STATE MEDICAL SOCIETY.

Thirty-first Annual Convention, held in Denver, June 18, 19, and 20, 1901.

Gonorrheal Rheumatism.

DR. HOBART E. WARREN emphasized the following points: Do not treat gonorrheal urethritis by irrigation; do not introduce an instrument into the urethra as long as a discharge or shreds are present. Gonorrheal rheumatism may occur without previous uro-genital infection. Definite points of tenderness about an inflamed joint are peculiar to gonorrheal arthritis. Administer anti-rheumatic remedies at the start; make early use of dry heat.

Mother's Milk.

DR. EDWARD C. HILL said that the true test of mother's milk is a grain in weight, about one-half ounce daily, as a rule. Loss of weight as a stationary condition should be an indication for an inquiry into the composition of the milk.

Consideration for the Radical Treatment of Uterine Carcinoma.

DR. W. A. JAYNE has come to the conclusion that when the disease has progressed so far that absolute removal is improbable or problematical, it is much better to discard hysterectomy and resort to the cautery.

Dry Heat in the Treatment of Disease.

DR. R. W. CORWIN described the physiologic influence of dry heat, and related the history of ten cases treated by this method in the Hospital of the Colorado Iron and Fuel Company with beneficial effect. His conclusions are that in surgery it is of great value. He suggested its use in sprains, stiff and tubercular joints, acute nephritis, cramps due to plumbism, arthritis deformans, and acute synovitis.

Case of Typhoid Fever with Greatly Enlarged Liver, and Intestinal Hemorrhages.

DR. ALFRED MANN reported the above case, in which the edge of the liver could be palpated for more than two months after the cessation of the fever, and in which hemorrhages from the bowel occurred on the 4th, 5th, and 6th week of the disease.

National Jewish Hospital for Consumptives.

During the past eighteen months 350 applications for admission were made, of which 228 were examined, and 204 admitted. They are admitted for a term of six months, and no longer than one year. The cases are divided into incipient (25), first (42), second (82), and third (43) stages. Improved 125, unimproved 39; worse 17, died 23. The predominance of right-lung involvement was marked. The largest number were tailors. In 152 cases, the family history was negative. Hemorrhage was present in 98 cases, and spitting of blood in 23 cases; 121 patients had night sweats, in 64 of whom they ceased on coming to Colorado; 92 had never had any; 75 per cent. had fever. In 166 cases bacilli were found; absent in 33 cases; there was no report on the remainder.

Mental Disturbances in the Course of Cardiac Diseases.

DR. ADOLPH ZEDERBAUM, after a careful study of many cases in his own practice, and an exhaustive research into the literature of the subject, arrived at the following conclusion: 1, that the heart, in a number of women during pregnancy and the puerperium, is subject to hypertrophy, which may become permanent, and pathologically affect the valves, and 2, that latent cardiac diseases of rheumatic and other origin may first come to the front during pregnancy, or in after labor.

Treatment of Neuralgia with Castor Oil.

DR. F. E. WAXHAM reported several cases of facial neuralgia treated successfully with large doses of castor oil. He administered 1 to 3 ounces three or four times daily. After the first two or three doses, it loses its cathartic effect. To make it palatable, he adds mucilage of acacia and lime water.

Bleeding in Radical Operation for Piles.

DR. WILL B. DAVIS thinks that thorough divulsion from anus to ampulla should be the preliminary step in all operations, and this will prevent post-operative hemorrhage by rendering the muscles incapable of contracting upon the veins, and the same procedure will immediately check a post-operative hemorrhage.

Typhoid Fever.

DR. W. A. KICKLAND, of Fort Collins, made the following deduction from a study of "100 Cases of Typhoid Fever Seen in Private Practice During the Fall of 1900": There is a greater similarity in cases infected from a common source than in the same number of cases occurring sporadically; that a rigid milk diet is not absolutely essential to prevent relapse, nor to a low rate of mortality, and that routine use of intestinal antiseptics with hydrotherapy gives as good results as can be obtained from any form of treatment.

Some Experiences with Venesection.

DR. H. B. WHITNEY made the following concluding statement: 1, conditions demanding venesection are usually of sudden onset; 2, such cases usually present not only cyanosis, but, also, the local signs of dilated right heart and pulmonary edema; 3, that the gradual heart failure of acute infection and chronic diseases can neither practically nor theoretically be shown to be a proper field for venesection.

Case of Talma's Operation for Ascites in Cirrhosis of Liver.

DR. M. BALLIN reported a case, 53 years old, saloon-keeper; 2 years ago dropsy of extremities; ascites in 1900. He was tapped repeatedly. The parietal peritoneum was greatly scarified with a knife in a semi-circle around the upper angle of the incision and then the omentum was sutured with four stitches to the scarified region. The ascites has not returned. There are about 28 cases reported in literature.

Esophagometer.

DR. C. D. SPIVAK exhibited a device under the above name for measuring the length of the esophagus. It consists of a stomach tube, to the end of which is attached a whistle as long as the tube traverses the esophagus; blowing into the tube will produce no sound. As soon, however, as the whistle reaches the stomach, blowing into the tube will produce a whistling sound. The distance from the whistle to the incisor-teeth, minus the distance from the incisor-teeth to the uvula, will give the length of the esophagus.

Treatment of Typhoid Fever with Intra-Rectal Injection of Normal Salt Solution.

DR. E. STUVER used cold normal salt solution by intra-rectal injection in the recent epidemic in Fort Collins with excellent results. He uses a very cold solution, and when the fever is high, even ice-water.

Extra-Uterine Pregnancy.

DR. O. J. PFEIFFER reported a case of extra-uterine pregnancy at the fimbriated end of the left tube, which recovered after the removal of the fetus. The fetus was only one-half inch long, although the pregnancy lasted two months. The sac is a remarkable symmetrical ovoidal sphere; its walls are about half an inch thick. The placental attachment is plainly shown.

An Outbreak of Pyemia, Suggesting Bubonic Plague.

DR. J. N. HALL reported the histories of 13 cases which have occurred in Colorado during the early months of this year. If a single case occurs it would be called pyemia of cryptogenetic origin: if many such are seen, the name becomes a mockery. Of the 13 cases, 2 may be classed as multiple abscesses, with recovery; 3 proved fatal; 1 partial recovery, and 1 lost to sight. Four cases had enormous axillary abscesses, with unusual severity of constitutional symptoms; all recovered. One case had a single abscess, and several bed sores; it was fatal. All these cases were investigated by the State Board of Health, at the request of the attending physicians.

Pulmonary Tuberculosis in Grand Junction Indian School.

DR. R. H. BULL reported 16 cases of tuberculosis that have occurred in the school since 1896, all of which improved as soon as they were returned to their respective reservations.

The Chest Pantograph.

DR. C. B. VAN ZANT applied the pantograph—an instrument devised by Dr. W. S. Hall, of Chicago, for graphic recording of the contour of the chest—to the study of the following conditions: To accurately record the alterations in chest form, which are usually designated by the vague words "some depression," "deficient expansion," etc., progressive deformities of the chest following emphysema, pleurisy, fibroid phthisis, etc., congenital or unprogressive deformities like pigeon-breast, funnel breast, rachitis chest, and as a means of keeping track of many conditions beside those of the thorax, change of size and shape of face in acromegaly, of head in hydrocephalous of neck in goiter, etc.

The X-Ray in Medicine, Surgery and Medical Jurisprudence.

DR. G. H. STOVER is of the opinion that skiagrams should not be introduced as evidence before a jury, because it is misleading; skiagrams never give an accurate image of the conditions as they actually exist; their meaning must be translated in connection with the findings of other and ordinary methods of examination.

The Physician in Relation to Dispensing of Medicine.

DR. J. TRACY MELVIN discussed the question whether we can be more certain in the results, more accurate in our dosage, more satisfactory to patients and ourselves by dispensing our remedies ourselves at the bedside than by sending our prescription to the pharmacist. In many of the country districts the physicians have been compelled by environment to adopt this plan, whether it is best or not, because of the long distance from any other source of supplies, but the question is: Should the practice be more general, and from choice, not necessity? He is in favor of the physician dispensing his own drugs, for the reasons that the drugs nowadays are put up in such a form that every physician can easily dispense them; the patient has more confidence in the remedy; the change in the drug does not attract attention, and the ability to change the dosage.

The Temperature, Pulse and Respiration in the Diagnosis and Prognosis of Certain Diseases of the Brain.

DR. J. T. ESKRIDGE, after a careful and exhaustive study of the subjects, makes the following conclusions: 1, a change in the character of respiration, rather than in its frequency, is sometimes one of the first symptoms of organic intra-cranial disease; 2, respiration, more frequent during sleep or unconsciousness, is strong evidence of organic disease of the brain; 3, apoplexy, due to hemorrhage, is attended with greater disturbances of the temperature of the body soon after the occurrence of the stroke than is the case when the apoplexy is due to thrombus or embolus. There will be a slight fall in the axillary temperature on the paralyzed side, and in 8 to 12 hours a slight rise on the same side; 4, in apoplexy, due to thrombus or embolus, there is no disturbance of temperature during the first two days; 5, if the temperature on the paralyzed side remains higher than on the opposite side for several weeks, it indicates softening or inflammation of the brain, and lends gravity to prognosis; 6, all cases of injuries to the head, in which the temperature does not reach normal or slightly above a few hours after the receipt of the trauma will likely prove fatal; 7, rapid, weak and intermittent or irregular pulse denotes great danger in traumatic cases; 8, an exceedingly slow (8 or 10 per minute) and intermittent respiration indicates a lesion at the base of the posterior fossa.

President's Address.

DR. WILLIAM P. MUNN, the retiring President, in his annual address, referred to specialism, and said: There never was a greater field for the family physician than to-day. Specialism has its limitations, recognized only too well by those who practice the specialties. The specialists in cities the size of Denver we find overworked and under-paid specialists, who seek to right themselves by a return to general practice, either of surgery or medicine. The gynecologists now accept all kinds of surgery. The surgeons take obstetric and gynecologic cases. The lesson of all this is that specialism has its legitimate boundaries set by nature and the inherent condition of the people, and their customs; otherwise specialism can not survive.

CHICAGO PATHOLOGICAL SOCIETY.

Regular Meeting, held June 10, 1901.

President, Dr. L. Hektoen, in the chair.

Division of Nervous Cells.

DR. ALICE HAMILTON presented a paper dealing with cell division in the central nervous system of the white rat before and after birth; the number and distribution of the mitoses, the period up to which they persist, and their character. Mitoses were found along the ventricular surfaces in the early stages of development, gradually ceasing here, and increasing in the outer layers, until at birth; almost all are in the outer layers. At birth mitoses are numerous and persist up to the end of the fourth day; beyond this period no examination was made. The dividing cells are of two kinds: 1, small, devoid of visible cell body, resembling cells of the neuroglia; 2, large, with abundant cytoplasm, round, pear-shaped or spindle-shaped. These are in the gray matter of the cord and brain and correspond in measurements with the multipolar and pyramidal cells.

In the later stages of development the offspring of the germinal cells become partially differentiated but without losing their power to divide. The large dividing cells are, then, immature nerve cells; the small are cells of the neuroglia. In the case of the white rat, these cells retain their power of division until after the fourth day of extra-uterine life.

Malignant Carbuncle of the Upper Lip, Followed by Pyemia.

DR. W. B. WHERRY related the following case: A barber, 23 years old, entered Prof. Bevan's service in the Presbyterian Hospital on Feb. 7, 1901, and died on Feb. 8, at 11:15 p. m.

About a week before his admission he extracted a "dead hair" from his upper lip. This was followed by redness of the lip and swelling, which rapidly extended to the side of the face and shoulder. He rapidly grew worse and died with all the characteristic symptoms of septico-pyemia. The post-mortem examination was held twelve hours after death by Professor Hektoen. The anatomical diagnosis is as follows: Acute, diffuse, purulent and necrotic staphylococcus inflammation of upper lip and adjacent parts of face; multiple abscesses and hemorrhagic pneumonic areas in lungs; double fibrino-purulent pleuritis; abscess in spleen; acute splenic swelling; cloudy swelling of kidneys and liver; persistent thymus.

Bacteriologically, a pure growth of the staphylococcus pyogenes aureus was isolated from the lip, heart's blood, pleural exudate, liver and spleen.

Histologically, the lip shows dense cellular infiltrations with foci of necrosis containing groups of cocci, which stain by Gram's method. The lung contains many pneumonic

and hemorrhagic areas and mycotic emboli. The other organs show the characteristic changes of a severe infectious process. The dangers of this affection depend chiefly upon its location and the virulence of the infective agent; the prognosis is extremely grave on account of the liability to thrombosis and embolism. The treatment of the early stage, which has so far given the best results, is excision of the necrotic area and packing with iodoform gauze. After thrombosis and embolism have occurred, treatment at the present time seems to be hopeless.

The Distribution of Segmentation and Fragmentaticn in the Myocardium.

DR. W. B. WHERRY: Twenty hearts were carefully preserved and eighteen pieces were taken from each heart. In searching for changes, the divisions into simple segmentation, and degenerative fragmentation and segmentation, made by J. B. MacCallum, were kept in mind. Degenerative fragmentation and segmentation occurred twice in the left auricle. Segmentation was distributed in the following order of frequency: left papillary muscles, wall of left ventricle, right papillary muscles, posterior surface of apex, etc. The changes in the walls practically correspond to the changes in the papillary muscles.

"Diffuse" segmentation of both left papillary muscles, accompanied by diastasis and displacement of the segments, seems to indicate more or less general segmentation and fragmentation throughout the ventricles.

Cyst-Adenoma of Ovary.

DR. E. FRIEND: Patient 31 years old; married five years; never been pregnant; menstruation regular and painless; family history negative. About eight years ago severe pain developed in the region of the left ovary, but upon examination this was pronounced healthy. About one year ago a swelling appeared, extending from the symphysis pubis to the umbilicus, but this gave no pain until about a month ago. She then entered the hospital and at operation there was removed from the right ovary a small, multilocular cyst. The patient made an uninterrupted recovery and was discharged from the hospital yesterday.

Adenomas develop as a result of disturbance in the formation of Pflüger's tubes in the growing ovary. Cyst-adenomas are simply adenomas which have undergone cystic degeneration; they consist of long, round, tortuous cavities, separated from each other by connective tissue. These cavities may become obliterated entirely or partially by papilliform growths.

The present officers were re-elected for the coming year.

Medicolegal.

Validity of Law Requiring So Much Fat in Cream Sold.—The Supreme Court of Minnesota holds, in the case of State vs. the Crescent Creamery Company, that section 7002 of the General Statutes of Minnesota of 1894, which prohibits the sale of cream that contains less than 20 per centum of fat, is a valid exercise of the police power and constitutional. It says that there is undoubtedly less necessity for a statute to prevent deception in the sale of cream than there is of one to prevent fraud in the sale of milk, because the latter may be classed as a necessity, and the former as a luxury, and its sale not as general as that of milk; but the distinction is one of degree, not of principle. In either case, the legislature is the sole judge of the necessity and propriety of preventing deception in the sale of the article, by appropriate legislation. And the constitutionality of such a statute as the one in question rests upon the same principles as does the validity of statutes prohibiting the sale of milk unless it contains a prescribed percentage of fat and solids, and other similar statutes, the constitutionality of which has been uniformly sustained.

Evidence of Misrepresentation in Procuring License.—The issue in the case of Curryer vs. Oliver, brought by the secretary of the State Board of Medical Registration and Examination of Indiana, was whether a physician's license had been obtained by fraud and misrepresentation, the misrepresentation alleged being that the holder was a graduate of a reputable medical college, when in fact he was not a graduate of any medical college. The evidence consisted of the record kept in the office of the clerk of the Clay circuit court, showing the issuance of a license to the party under the act of 1885. The clerk who made the record testified that the license would not have been issued if the party had not made an affidavit, and that the information as to the name of the university from which he graduated and the date of his diploma were taken from such affidavit. The affidavit itself could not be found, although search was made in the proper place at various times. The book containing the copy of the license was identified as "The Record of Physicians' Certificates." It was kept in the clerk's office of Clay county. No objection was made to the admission in evidence of this record. The statute then provided, among other things, that "such applicant shall pay to such clerk for such license the sum of $1.50, and the clerk shall record such license, together with the name of the college in which such applicant graduated, and the date of his or her diploma, in a book to be kept for such purpose, and which shall be a public record." Upon this evidence there can be no doubt, the Appellate Court of Indiana holds, that the party procured a license upon the misrepresentation that he graduated from the institution named at the time named; at least, it says, such inference might be fairly drawn, the presumption, until the contrary is shown, being that the clerk properly discharged his duty. Moreover, there was introduced in evidence an affidavit made by this party in 1897 upon which a certificate of registration was issued to him in which affidavit it was stated by him that he was not a graduate of the university before referred to. And the court holds that from the evidence so introduced, in the absence of any explanation or denial by the party, the ultimate facts charged might have been properly inferred, wherefore it holds that it was error to sustain a motion for a finding and judgment in favor of the party on the evidence at the close of the petitioner's or secretary's evidence.

Therapeutics.

[It is the aim of this department to aid the general practitioner by giving practical prescriptions and, in brief, methods of treatment for the diseases seen especially in every-day practice. Proper inquiries concerning general formulae and outlines of treatment will be answered in these columns.]

Treatment of Tenia Solium (Tapeworm).

The treatment of tapeworm divides itself into three parts or stages: 1, the preparation of the intestinal canal; 2, the destruction of the tapeworm; 3, its expulsion. It must be remembered in carrying out the above treatment that it taxes the strength of the patient and consequently should not be undertaken on those patients recovering from prolonged illness, in sufferers from carcinoma, or tuberculosis or in pregnant women. To meet the first requirement, the intestine must be emptied as thoroughly as possible in order that the remedy may more readily come in contact with the parasite. Consequently a good laxative or mild cathartic should be given for a day or two previous to administering the teniafuge. At the same time, a diet should be prescribed consisting of fruit, containing small seeds such as strawberries, raspberries, gooseberries and new currants, also considerable milk, eggs and meat, with but little bread and potatoes. The night previous to the administration of the teniacide, the patient should partake of a salad consisting of dried herring, garlic and onions. The object, of course, in the above diet is to include only those articles that can be digested in the stomach. The above salad is supposed to be repulsive to the worm. A high enema should also be given the night previous to giving the teniafuge so as to cleanse thoroughly the large intestine.

To carry out the second part of the treatment some drug

must be administered that will either kill the worm or narcotize it so that it will release its hold upon the wall of the intestine and aid in its expulsion. There are a great many preparations recommended, but few of them are efficient. The one preparation most to be relied upon is the male fern, administered as follows:

℞. Oleoresinæ aspidii 3i

M. Ft. capsulæ No. vi. Sig.: Take in keratin coated capsules at intervals of ten minutes, beginning early in the morning.

Previous to its administration the patient should be instructed to remain in bed in order to guard against vomiting. One hour after the last capsule has been taken, a brisk cathartic should be administered. Magnesium sulphate is regarded as preferable to oleum ricini, as the oil is said to increase the absorption of the male fern, which, of course, should be avoided on account of danger of producing toxic effects.

Treatment of the Umbilical Cord.

Dr. A. H. Longstreet, of Brooklyn, states in the *New York Med. Jour.*, that if there should be some inflammation or irritation of the umbilicus either before or after the cord drops, or if the parts keep moist, to apply the following:

℞. Pulv. acidi salicylici 3i	4	
Amyli .....℥i	32	

M. Bathe the part and dry thoroughly and apply as a dusting powder.

Diarrhea in Children.

The following is recommended by Hirsch, in *Pediatrics*:

℞. Argenti nitratis .....gr. i		06
Sacchari albi 3ii	8	
Aq. destil. .....℥ii	64	

M. Ft. mistura. Sig.: One teaspoonful every two hours for newly-weaned infants.

Treatment of Glaucoma.

Dr. Wicherkiewicz, as noted in *Med. Age*, recommends the following very highly in the treatment of acute as well as chronic glaucoma:

℞. Eserinæ salicylatis .....gr. 1/6		01
Pilocarpinæ muriatis .....gr. iii		20
Cocainæ muriatis .....gr. i		06
Aq. destil. 3iiss	10	

M. Sig.: One drop into the affected eye once a day, at bedtime.

The mydriatic action of the cocain is neutralized in this combination through the eserin and pilocarpin, and intraocular tension is diminished through the use of this collyrium. He states that in fresh and acute cases, the solution should be dropped into the eyes three times a day.

In chronic glaucoma where iridectomies have no effect in stopping the progress of the disease, he has seen marked improvement in vision as well as in the structure of the eye, following the use of these drops, applied once a day at bedtime.

Amyl Nitrite in Seasickness.

The following prescription containing amyl nitrite is recommended by Martindale:

℞. Amyl nitritis .....m. viii		5
Alcoholis (90 per cent.) 3i	4	
Pulv. trogacanthæ .....gr. iv		25
Aquæ destil. .....℥ii	64	

M. Sig.: One to two teaspoonfuls at one dose.

Treatment of Suppurative Otitis Media.

N. G. Ward, of Philadelphia, in an article published in *Amer. Med.*, states that in acute cases of otitis media, he syringes the ear out with a solution containing one to three drops of formalin to the ounce. In the most obstinate cases and those with granulations, alcohol is added:

℞. Formalin .....gtt. v		30
Alcoholis (95 per cent.) 3ii	8	
Aquæ q. s. ad .....℥i	32	

M. Sig: The affected ear to be irrigated with a syringe.

Santonin in Treatment of Tabetic Pains.

Negro, as stated in the *British Medical Journal*, has used santonin in relieving the lightning pains of tabes dorsalis with good success. He gave, at the beginning, 5 grains every three hours until three doses were given and in subsequent attacks he gave 10 grains at a dose. He continued this treatment during the crisis only and found that the pain would gradually disappear, and ceased entirely after the second dose was given.

Sodium Bicarbonate in Vomiting of Pregnancy.

Monin, as stated in *Lyon Médical*, notes the resemblance of the symptoms which pregnant women present to those of hypersecretion, such as gastric pain, nausea and vomiting, excessive acidity, occurring in the morning and relieved by taking food into the stomach. He believes in both cases that the stomach is secreting continuously and not at the digestive periods alone. He states that good results have been obtained by administering sodium bicarbonate in 30-grain doses four or five times a day in capsule.

Treatment of Mosquito Bites.

Dr. A. Manquat states that the most successful treatment consists in the local use of formalin, tincture of iodin and alcohol. He uses the pure formalin or alcohol in one-half strength. The tincture of iodin is objectionable because of the stain it leaves on the skin.

As a prophylactic against mosquito bites the following combination is of service:

℞. Olei picis liq.		
Olei olivæ, āā 3vi		24
Olei hedeomæ (pennyroyal) .....℥ss		16
Spts. camphoræ 3iii		12
Glycerini 3iiss		10
Acidi carbolici 3i		4

M. Sig.: Apply on retiring.

Current Medical Literature.

Titles marked with an asterisk (*) are noted below.

Philadelphia Medical Journal, June 29.

1 *Some Tropho-neuroses and Their Relations to Vascular Disease of the Extremities. E. Sachs and Alfred Wiener.
2 *The Freezing-Point of Urine: Its Determination and the Inferences which May Be Drawn from It. J. H. Huddleston.
3 A Preliminary Report upon a Case of Uncinariosis (Ankylostomiasis). Thomas A. Claytor.
4 The Role of Infection and Intoxications in Diseases of the Spinal Cord. Alfred Gordon.

Medical News (N. Y.), June 29.

5 *The Importance of a Recognition of the Significance of Early Tuberculosis in Its Relation to Treatment. E. L. Trudeau.
6 A Study of Some Complications and Sequelæ of Typhoid Fever. (Continued.) H. A. Hare and H. R. M. Landis.
7 *Treatment of Diabetes Mellitus. Abraham Mayer.
8 *Cutaneous Manifestations in Diabetes. S. Sherwell.
9 *Diabetes in Surgery. Robert T. Morris.

New York Medical Journal, June 29.

10 Rabelais as a Physiologist: Reflections Suggested by His Description of the Production and Movements of the Blood, in 1546. Austin Flint.
11 *Notes on Ringworm. A. Ravogli.
12 Hyperacidity (Superacidity, Hyperchlorhydria, Superaciditas Chlorhydrica): A Clinical Study. (Concluded.) H. Illoway.
13 *Congenital Malformations of the Upper Extremity. Carl Beck.
14 *The Mental Diseases of Childhood. William B. Noyes.

American Medicine (Philadelphia), June 29.

15 *The Treatment of Abdominal Aortic Aneurysm by a Preliminary Exploratory Celiotomy and Peritoneal Exclusion of the Sac, Followed at a Later Sitting by Wiring and Electrolysis, with the Report of Two Hitherto Unpublished Cases. (Concluded.) Rudolph Matas.
16 Persistence of the Thyroglossal Duct. David Riesman.
17 Subtrochanteric Osteotomy for the Deformity Following Hip Disease. E. H. Bradford.
18 *The Hallucinations of Digitalis—Does Digitalis Cause Hallucinations, Delirium or Insanity under Certain Conditions? Harry Orville Hall.

19 The Treatment of Congenital Dislocation of the Hip-Joint. Leonard W. Ely.
20 Prevention of Disease Infection by Micro-organisms Through the Mouth and Nasal Cavities. Robert Reyburn.

Medical Record (N. Y.), June 29.

21 *Clinical Annotations on Five Cases of Right-side Abdominal Disease. A. A. Berg.
22 *Tonometric Examination in Chronic Diseases of the Heart. Theodor Schott.
23 *Chronic Gonorrhea and Post-Gonorrheal Urethritis—A Sketch of Their Modern Treatment. Ferd C. Valentine.
24 Tuberculous Mastitis. R. A. Giuliana.

Boston Medical and Surgical Journal, June 27.

25 *A Study of the Food Consumed and Digested by Four Members of the Harvard University Boat Crew in June, 1900. (Concluded.) W. I. Atwater and F. G. Benedict.
26 Some Forms of Intestinal Obstruction Due to Adhesions. A. T. Cabot.
27 *Catharsis in Abdominal Surgery. L. R. G. Crandon.
28 A Case of Measles Complicated by Appendicitis. Harold Williams.

St. Louis Medical Review, June 29.

29 Emergency Surgery in the Country. Edward W. Lee.

Cincinnati Lancet-Clinic, June 29.

30 *Pelvic Massage as an Aid in the Treatment of Gynecologic Lesions. Louise Southgate.
31 *Valves of the Rectum. E. W. Mitchell.
32 Akromegalia. T. L. Cornwell.

Virginia Medical Semi-Monthly (Richmond), June 7.

33 Importance and Difficulties of the Correct Diagnosis of Insanity in Its Medicolegal Aspects. J. T. Wilson.
34 Placenta Previa. Virginius Harrison.
35 The Use and Abuse of Ecbolics. J. Wesley Bovée.
36 Practical Results from Examination of the Stomach Contents. E. Guy Hopkins.
37 A Case of Addison's Disease, Treatment with Suprarenal Extract. W. B. Atkinson.

June 21.

38 *The Limitations of Surgery in the Treatment of Nervous and Mental Diseases. William B. Pritchard.
39 Sudden Death Six and One-half Days After Gastroenterostomy. I. S. Stone.
40 The Early Operation for Appendicitis from a Pathologic Standpoint. J. G. Carpenter.
41 *The Arrest of Progressive Hardness of Hearing, Tinnitus Aurium and Ear Vertigo. Charles H. Burnett.
42 A Clinical Résumé of Typhoid Fever. George W. Gay, Jr.
43 Some Thoughts on Cystitis. C. N. Brown.

Pediatrics (N. Y.), June 15.

44 A Case of Mongolism. W. Winston Hall.
45 An Eruption Resembling Pemphigus Vegetans in an Infant. E. A. Fischkin.
46 A Case of Acute Tubercular Peritonitis with Strangulation of the Appendix by Adhesions with the Ileum. Charles G Cumston.
47 Tubercular Disease of Right Hip and Left Knee. J. M. Krim
48 Report of a Case of Laryngeal Stenosis. I. A. Abt.

Northwestern Lancet, June 1.

49 Report of a Case of Cystic Kidneys. A. R. Brackett.
50 A Case of Meralgia Paresthetica: Sensory Disturbances involving Six of the Seven Cutaneous Branches of the Lumbar Plexus. Mary B. Damon.
51 *The Diagnosis and Treatment of Intestinal Obstruction. James H. Dunn.
52 *The Symptomatology in Acute Nephritis. George D. Head.

June 15.

53 Corneal Ulcer: Its Diagnosis and Treatment. J. H. James.
54 Puerperal Ecampsia. H. H. Critchfield.
55 *Adrenalin Hypodermically Injected to Prevent Hemorrhage During Operations, with Report of a Case. Frank C. Todd.
56 *The Differentiation Between Cancerous and Tuberculous Tissues. C. H. Hunter.
57 The Pantherapist and Neotherapeutics. C. H. Kermott.

Medical Age (Detroit, Mich.), June 10.

58 *Psychotherapeutics. Philo D. Patterson.
59 The Use of Adrenalin Solutions. Albert E. Bulson, Jr.

Fort Wayne Medical Journal-Magazine, June.

60 Anesthesia. Chas. O. Wiltfong.

Western Medical Review (Lincoln, Neb.), June 15.

61 President's Address, Nebraska State Medical Society. H. M. McClanahan.
62 *Traumatic Injuries of the Ureter. J. W. MacDonald.
63 *Etiology and Pathology of Surgical Infections of the Kidneys and of the Cystonephroses. M. L. Harris.
64 Surgical Infections and Cystic Enlargements of the Kidney—Their Symptomatology and Diagnosis. W. H. Allport.
65 *Treatment of Septic Infections of the Kidney and Cystonephroses. L. L. McArthur.

University of Pennsylvania Medical Bulletin (Philadelphia), June.

66 *The Topical Treatment of Focal and Jacksonian Epilepsy. J. William White.
67 Right-sided Cardiac Hydrothorax. Alfred Stengel.
68 Cerebellar Lesions without Cerebellar Symptoms. William G. Spiller, W. E. Robertson and W. S. Wadsworth.
69 A Case of Complete Unilateral Oculomotor Palsy. David Riesman.
70 Some Forms of Apparatus Used in the Course of Practical Instruction in Physiology in the University of Pennsylvania. Edward T. Reichert.
71 A Series of Twelve Articles on Medical Men Prominent in the Civil and Military Affairs of Revolutionary Times. Francis R. Packard.

American Gynecological and Obstetrical Journal (N. Y.), June.

72 *Cancer of Uterine Fundus. J. M. Baldy.
73 Some Remarks on the Cesarean Section with a Report of a Case for the Relative Indications. George M. Boyd.
74 The Pubescent Schoolgirl. Wm. Edgar Darnall.
75 *The Choice of Operation in Retrodisplacements of the Uterus. Frederic Coggeshall.
76 Tubal Abortion. Herman E. Hayd.
77 What Is the Significance of Cervical Lacerations? Some Points Connected with Their Treatment. Chauncey D. Palmer.
78 *Myomectomy of Nine Myomata During Pregnancy and Delivery at Term. John D. Emmet.

Physician and Surgeon (Detroit and Ann Arbor, Mich.), May.

79 The Doctor in Public Life. Albert E. Carrier.
80 The Relation of Fermentation to Disease. Earnest L. Shurly.
81 Appendicitis, with Report of a Case Complicating Ovarian Degeneration. Alvah N. Collins.
82 Historical Sketch, Etiology and Pathology of Diabetes Mellitus. Moses A. Fechheimer.
83 Course and Treatment of Diabetes Mellitus. James E. Davis.
84 Recent Experience with Smallpox. Theodore Schmalzriedt.
85 A Periosteal Elevator. Emil Amberg.

Peoria Medical Journal, June.

86 What of Electricity? O. B. Will.
87 Sanitation. W. R. Allison.

American Journal of Medical Sciences (Philadelphia), July.

88 *Two Cases of Operation for Traumatic Epilepsy; in One of which the Lateral Ventricle was Widely Opened: in the Other, an Abscess of the Brain, Caused by a Portion of Bone Being Embedded in the Brain for Fourteen Months, Was Evacuated. W. W. Keen.
89 *Primary Tuberculosis of the Pericardium. David Riesman.
90 The Extension of Aortic Aneurysms into and Between the Walls of the Heart and Dissecting Aneurysms of the Heart. Ludvig Hektoen.
91 *A Periendothelioma of the Dura Mater Involving the Cranial Nerves. D. R. Brower and H. G. Wells.
92 *Gonorrheal Myositis. Martin W. Ware.
93 Double Ureter of the Right Kidney. Charles L. Scudder.
94 Bronchial Concretions. L. W. Atlee.
95 *Progressive Muscular Dystrophy, with the Report of an Autopsy. B. Sachs and Harlow Brooks.
96 The Malaria of the Tropics. Barton Lisle Wright.

Iowa Medical Journal (Des Moines), June 15.

97 Early Diagnosis of Cancer of the Uterus and Breast. D. C. Brockman.
98 Iowa State Association of Railroad Surgeons. G. G. Cottam.
99 Melancholia. Max E. Witte.
100 Puerperal Infection from a Surgical Standpoint. G. G. Cottam.
101 Some Thoughts on Emergency Surgery. G. G. Cottam.
102 New Findings in Ophthalmology. E. H. Hazen.

Illinois Medical Journal (Springfield), June.

103 President's Address, Illinois State Medical Society. Geo. N. Kreider.
104 The Duty of the State in Regard to Tuberculos's. George W. Webster.
105 Progress in Medicine. J. L. Spalding.

Journal of Eye, Ear and Throat Diseases (Baltimore, Md.), May-June.

106 Report of a Series of Cases of Mastoiditis, with Operations. J. William Watson.

Journal of Medicine and Science (Portland, Me.), June.

107 Lecture on the Tribulations of the Pharmacist. Joseph P. Remington.
108 *Two Unusual Cases in Surgery. W. P. Giddings.

Interstate Medical Journal (St. Louis, Mo.), June.

109 Clinical Lecture on Surgery. N. Senn.
110 Katatonia. George Boody.
111 Some of the Uses of Electricity in Gynecologic Practice. W. H. Walling.
112 Anemia. W. S. Lessenger.
113 Otomycosis. Robert M. Lapsley.

New York State Journal of Medicine (N. Y.), June.

114 *Tuberculosis of the Eye: Its Differential Diagnosis, Pathology and Treatment. Charles Stedman Bull.
115 After-Treatment of the Child in Normal Cases. Bernard Cohen.
116 *Parasites in the Blood. Leon T. LeWald.
117 *The Tonsils as Portals of Infection. Julius Ullman.

Medical Herald (St. Joseph, Mo.), June.

118 Antepartum Diagnosis. A. B. Somers.
119 Association, in Women, of Pelvic and Hepatic Disease. Inez C. Philbrick.
120 An Improved Introducer for Intubating the Larynx. F. W. Dean.
121 Chorea. E. A. King.

Merck's Archives (N. Y.), June.

122 *Nourishment by Ordinary Food. A. L. Benedict.
123 Urea in the Treatment of Tuberculosis. Augustus A. Eshner.
124 *Some Considerations Concerning the Toxicity of Acetanilid. Samuel E. Earp.
125 *Thiosinamine: Its Pharmacology and Therapeutic Uses. William J. Robinson.
126 An Essay on Opium and Its Alkaloid Morphin, and Their True Value in Modern Therapeutics. (Continued.) Adolfo Luria.

Dominion Medical Monthly (Toronto), June.

127 Clinical Notes on Some Injuries to the Shoulder Joint. R. B. Nevitt.

Pacific Medical Journal (San Francisco), June.

128 A Report of 290 Abdominal Cases, with Comments. J. T. Stewart.
129 The Treatment of Varicose Veins and Ulcers. A. W. Morton.
130 Diseases of the Digestive Organs. Alfred W. Perry.

Detroit Medical Journal, June.

131 Ectopic Pregnancy. H. W. Longyear.

Southern Medical Journal (La Grange), June.

132 Infantile Convulsions. Francis W. Campbell.
133 Hyperemesis Gravidarum. J. W. P. Smithwick.
134 On Cases of Eczema in Subjects of Ichthyosis and Others. Dr. Whitfield.
135 Infantile Diarrhea: a Clinical Report. J. W. P. Smithwick.

Alabama Medical Journal (Birmingham), June.

136 Otorrhea—"A Rising in the Head." W. L. Bullard.
137 Actinomycosis in Man—Report of a Case with Special Reference to the Treatment. W. D. Gaines.
138 Cases from Practice. Shelby C. Carson.
139 Influenza. W. W. Harper.
140 Physician and His Status—Present and Future. R. C. Bankston.
141 The Widal Reaction. Edgar Allen Jones.

Southern Illinois Journal of Medicine and Surgery (Metropolis), June.

142 Address of Welcome, Southern Illinois Medical Association. H. C. Fisher.
143 The Doctor's Mission. W. F. Grinstead.
144 Medicine and Surgery. Benj. O. Jones.

Medical and Surgical Monitor (Indianapolis, Ind.), June 15.

145 Report of a Case of Symmetrical Gangrene (Raynaud's Disease) Concomitant with Valvular Cardiac Lesion. Wm. H. Orr.
146 A Consideration of Tenia, Ascaris Lumbricoides and Oxyuris Vermicularis and Their Treatment. Samuel E. Earp.
147 How to Manage a Normal Case Through the Puerperium. Elizabeth Malone.
148 Epileptiform Conditions of a Reflex Nature. F. M. Lynn.

American Journal of Surgery and Gynecology (St. Louis, Mo.), May.

149 Bloodless Amputation at the Hip in Railway Surgery. John A. Wyeth.
150 A Compact Operating Case for Railway Surgeons. N. Senn.
151 Ambulatory Treatment of Fractures Involving the Hip-joint. Daniel W. Marston.
152 An Idea in Post-operative Treatment of Empyema, with Two Cases Illustrative. R. J. Christie, Jr.
153 Wandering Kidney (continued). Emory Lanphear.
154 Clinical Report of a Few Severe Cases of Traumatism. Thomas H. Manley.
155 Amputations Below the Knee. Edward W. Lee.
156 "Blood Washing" In Septicemia. Robert T. Morris.
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159 Modern Gynecology. Lucy Waite.
160 Wandering Kidney (continued). Emory Lanphear.
161 *Abdominal vs. Vaginal Hysterectomy. Henry O. Walker.
162 The Use and Abuse of Anesthetics. Alfred Roulet.
163 Protection of an Inflamed Median Nerve by Gold Foil After Five Fruitless Operations. D. S. Fairchild.
164 "Railway Surgery" in America. Clark Bell.
165 Résumé of Work Done by New York State Association of Railway Surgeons. Geo. Chaffee.
166 Medical Treatment During the Adolescent Period of Girls. Edwin Rosenthal.

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167 Medical Society of North Carolina—Annual Meeting at Durham. President's Address. Julian M. Baker.
168 Pneumonia and Its Treatment. John C. Rodman.
169 Conservative Treatment of Diseases of the Uterus. John Thames.
170 The Importance of Early Diagnosis and Treatment of Tuberculosis. J. P. Munroe.
171 A Few Great Names in Medical History. J. Edwin Kerr.
172 Antitoxin Animal Extracts and Serums. H. T. Bass.
173 Prevention and Sequelæ of Scarlet Fever and Measles. Edmund Harrison.
174 Nitrate of Silver in Typhoid Fever. J. T. J. Battle.
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176 Why Have Not Materia Medica and Therapeutics Advanced More Rapidly? And Some Suggestions for Their Future Development. A. Cheatham.
177 Amputation of the Arm, Together with the Clavicle and Scapula for Malignant Growth. R. L. Payne.
178 Etiology and Treatment of Menorrhagia and Metrorrhagia. W. W. McKenzie.
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180 The Physician as a Sanitarian. David A. Stanton.
181 Some Observations Relative to the Time and Indications for the Use of Obstetrical Forceps. L. D. Wharton.
182 Some Points on the Hygiene of Infancy and Childhood. Sallie Borden.
183 Report of the Chairman of the Section on Obstetrics, North Carolina Medical Society. Frank H. Russell.
184 Gynecology: Its Present Status and Possibilities. H. S. Lott.
185 The Need for Greater Care in Making Examinations and in Sending Patients to the State Hospitals. Isaac M. Taylor.
186 Blood Metabolism. E. D. Dixon Carroll.
187 *The Limitations of Surgery in the Treatment of Nervous and Mental Disease. W. B. Pritchard.
188 Extensive Necrosis of Inferior Maxilla; Operation; Recovery. 2. Extrauterine Pregnancy, with Long-retained, Full-term Dead Fetus; Laparotomy; Death. A. W. Knox.
189 The Problem of Typhoid Fever in the Rural Districts of North Carolina. H. W. Lewis.
190 An Unusual Case of Gall-stone. T. P. Wynn.
191 The Importance of an Early Definite Diagnosis of Appendicitis. J. Ernest Stokes.
192 Exhibition of Three Cases. H. A. Royster.
193 Bisol: Its Superior Merits and Practical Advantages Over Other Bismuth Salts. H. G. Ostrander.

AMERICAN.

1. **Tropho-Neuroses.**—Sachs and Wiener publish three cases of arterial diseases of the lower extremities and discuss the relation of tropho-neuroses in this region to special conditions. They suggest that it would be well to pay greater attention to the arteries of the lower extremities. Intermittent claudication and some vague rheumatoid affections may be due to arteriosclerosis. Whether immediate relation exists between the peripheral blood vessels and many of the tropho-neuroses as primary or secondary may be left to future investigation.

2. **Cryoscopy.**—Huddleston's article gives the details of the methods of cryoscopy, which are too long to be reproduced here. He believes that the method represents a notable advance in the application of quantitative physico-chemical methods to clinical work and that it may be of considerable value in the diagnosis and prognosis in cardiac diseases and to a less extent in other cases. It is, however, a laboratory method requiring time and care.

5. See abstract in THE JOURNAL, XXXVI, p. 1415.

7. **Diabetes.**—The treatment of diabetes should be directed to eliminating the amount of sugar of the urine and blood, maintaining the nutritive equilibrium of the patient or even increasing it, and maintaining or increasing the function of assimilating carbohydrates, and the prevention of complications. In treating the affection it has been Mayer's custom to divide the cases into mild and severe forms without regard to origin. The mild form he holds are cases in which by removal of carbohydrates the urine loses its glycosuria or it is reduced to an infinitesimal amount without much influence on the weight of the patient. In severe cases this is not the case and there

is wasting, acetone, diacetic acid, etc., are found in the urine. The prime object in the treatment of mild cases is to diminish the hyperglycemia and gradually reduce the carbohydrates, by using three or four days for the reduction and by keeping them excluded for three or four weeks. In this way a tolerance sometimes becomes established and so after several weeks or months they can take quite a liberal quantity. In most cases where small amounts of sugar still persist it will be necessary to reduce the proteids with the carbohydrates, substituting for them their caloric value in fats. Frequently milk can be substituted for both. The patients can take large quantities of lactose without showing much or any increase of sugar. If this, together with proper medical treatment, fails, the case is a progressive one and should be called severe. In the severe type he is very cautious about the dietetic treatment. When the urine reacts to Gerhardt's test, a strict rigid diet is a grave error and very dangerous, but where this is negative and the quantity of urea is normal without much increase and the patient still in the prime of life, rigid diet may be enforced in the beginning. In many of these cases there is increased nitrogenous metabolism and the aim should be not so much to decrease the sugar excretion as nitrogenous waste and production of diaceturia. He gives the diet tables for these different classes of cases. As regards medicines, when the diet removes hyperglycemia and glycosuria, drugs will only be required for faulty stomach action, or sluggish bowels. There are some drugs, however, which seem to have a beneficial effect on the excretion of sugar. Opium is one of these. He uses it for its beneficial effect on thirst and the general effect on the patient's mental and physical condition. The dose should be small in the beginning and .5 grain three times a day about one hour after meals, but to get its full effect it may have to be increased to three times this amount. In the severe cases in which the Gerhardt reaction is shown it should never be used; it should not be continued long in any case. He has found arsenic useful in mild cases, in conjunction with the diet and it has given him gratifying results. He uses only Fowler's solution and bromid salt, the latter in doses of one-thirtieth to one-tenth of a grain three times a day with much water after meals. In a certain class of diabetics beginning about middle life, high livers, the disease commences not unlike an acute affection and the percentage of glucose is found to be very high. He recommends bichlorid of mercury and finds it a specific in the reduction of sugar and amelioration of symptoms. It should be given off and on for ten days of the month, commencing with one-twelfth of a grain thrice daily, after meals, increasing it to one-sixth of a grain thrice daily after meals. The hygienic treatment is mentioned as important; also to keep up cheerful surroundings with moderate exercise, avoiding fatigue, and sometimes treatment by massage. The complications are also mentioned.

8. **Skin Lesions in Diabetes.**—The skin lesions mentioned by Sherwell are: 1. Generalized xeroderma, prevailing in the large majority of cases, and pruritus, which is sometimes almost a disease of itself. Next in the order of frequency are eczematous dermatitic manifestations, usually on flexor surfaces, and especially in the genital, anal, and inguinal regions, where they should excite suspicion and lead to careful examination of the urine. He thinks these conditions, though not so grave, are more distressing to the patient than any other. Furuncular and carbuncular manifestations are often concurrent as is well known and are clearly caused by the diabetic state. Erythematous lesions are sufficiently common as results of this glycosuric state. The only case he has ever seen of erysipeloid manifestations on the fauces and upper air passages have been in diabetes. The so-called dermatitis herpetiformis or Duhring's disease has often diabetes for one of its etiologic factors, and there are one or two morbid growths originating by the diabetic diathesis or state. He refers to xanthoma diabeticorum and possibly to blastomycetic dermatitis. Of the latter, however, he has had no personal experience.

9. **Diabetes in Surgery.**—There are three chief reasons, according to Morris, why diabetes interferes with surgery: 1. The sugar circulating in the blood is hygroscopic and it draws water from all the tissues of the body until they are too dry, interfering with the normal processes of repair. 2. The fluids of a wound loaded with sugar are likely to be excellent culture media and the wounds are difficult to keep aseptic. 3. The anesthesia may precipitate an impending nephritis in kidneys that have become irritable on account of the unusual labor in excreting sugar. The relation of trauma to diabetes is also discussed. Injuries of the head cause about one-half of the cases of traumatic diabetes, and the other one-half are due to injuries of the pancreas, stomach or spleen. Traumatic diabetes is apt to be associated with traumatic neuroses of various kinds. The glycosuria, while often transitory, may become permanent. He suggests caution, however, when called upon to testify as to the cause of diabetes, unless we fully know the history of the patient in this regard previous to the time of injury.

11. **Ringworm.**—The symptoms and pathology of ringworm are discussed and described by Ravogli. As regards the treatment, he says almost any substance causing defoliation of the epidermis will suffice for local application. In the obstinate cases he has used the electric current from the positive to the negative pole. He uses an electrode having attached a sponge impregnated with antiparasitic solution, usually ordinary 1 per cent. bichlorid of mercury solution, applied to the diseased patch and the negative pole at some distance. This causes a penetration much deeper than would be the case without the help of the electric current. The method was suggested by H. J. Reynolds of Chicago. He calls particular attention to the need of care in using public combs, towels, etc., the dangers in barber shops, schools, and the like. He thinks that with care and attention tinea tonsurans can be easily diminished and prevented from spreading.

13. **Congenital Malformations of the Upper Extremity.**—Beck's article is a description of various congenital deformities of the upper limbs with skiagraphs and other illustrations, with remarks also on their surgical treatment.

14. **Mental Diseases of Childhood.**—According to Noyes there is in children a fatigue period from 7 to 9 years when tire occurs most easily. The heart is then more likely to be injured and the foundation of future mental weakness or disease often laid. Overstrain during this period commonly results in breakdown of the general health. The period of puberty following this is the time when mental symptoms begin to appear and he gives instances showing the condition and a long list of insanities or mental aberrations that may make their appearance at this time. Insanity is rare before adolescence, but the less pronounced psychical disturbances in young children are often the first manifestation of strain or symptoms that end some years later in the development of one of the definite clinical forms of adult insanity. There is no sharp dividing line between the symptoms of the neuropathic child and the psychopathic adult.

15. **The Moore-Corradi Method.**—In the conclusion of his paper Matas discusses the limitations and disadvantages of the Moore-Corradi method and summarizes the latter as follows: 1. The cure of the aneurysm may lead to the death of the patient by obliterating the orifice of important visceral arteries; this is most likely to occur in dealing with aneurysms of the upper or celiac division of the abdominal aortic tract—i. e., in about 50 per cent. of the cases. 2. Secondary rupture of the sac from the strain put upon weak portions of the sac in multilocular aneurysms, after partial coagulation of the contents has taken place (particularly likely to occur in subjects of general endarteritis with atheroma). 3. Escape of wire through a large aneurysmal orifice into the lumen of the aorta, with migration upward into the heart leading to perforation, traumatic endarteritis, endocarditis, with the formation of secondary thrombi and emboli. 4. Danger of perforating the sac by stiff wire or by overcrowding the sac with too much wire 5. Danger of extension of clot from the coagulum in the aneurysm to the main artery, leading to fatal blockade at the

bifurcation, with gangrene of the lower extremities. 6. Danger of rupture of sac from sudden withdrawal of abdominal support and displacement of adherent organs in the course of the exploratory laparotomy. 7. Danger of mistaking a fusiform for a sacciform aneurysm. 8. Danger from emboli and thrombi following incomplete coagulation of the blood in the sac (a very rare and practically unknown occurrence in abdominal cases). 9. Danger of shock. 10. Danger of sepsis. In the presence of this formidable array of dangers he asks what are the conditions favorable to its successful application, and answers that as theoretically possible but clinically rare the following conditions may be enumerated: 1, the aneurysm should be saccular; 2, it should be unilocular; 3, it should be provided with fairly strong, resisting walls; 4, the patient should be young or middle aged, fairly healthy, and free from general endarteritis and atheroma; 5, the aneurysmal orifice communicating the sac with the lumen of the parent artery should be small; 6, the aneurysmal sac should spring from the lower, inframesenteric division of the artery, preferably between the origin of the superior mesenteric and the bifurcation; 7, if given off from the celiac region the orifice should be situated on the posterior or lateral wall of the aorta. He says in conclusion, after analyzing the question from every point of view, we are compelled to admit that very little advantage is gained from the use of the method and he would restrict recommendation of the method to a small group of comparatively favorable cases in which the aneurysms are confined to the inframesenteric portion of the aorta and then only after other safer methods have been tried and failed. In aneurysms of the upper part of the aorta he would regard the procedure a pure experiment. He would not recommend it then, even in the danger of death, unless by the urgent solicitation of the patient and with a full explanation of the chances he has.

18. **Digitalis.**—Having had his attention called to a case of acute delirium and mania apparently due to the use of digitalis, Hall looked up the literature and finds the subject treated in a monograph by Duroziez, who reports twenty cases. He asks for the reports of the observations of the profession of similar facts.

21. **Right-Side Abdominal Surgery.**—Berg gives the histories, with diagnosis of appendicitis, of a case of typhoid fever with intestinal perforation and recovery after suturing, and a case of purulent tubercular peritonitis operated upon by celiotomy, with recovery; a case of empyema of the gall-bladder with impactions in the cystic duct, cholecystotomy and recovery; a case of suppurative appendicitis complicated with large ovarian cyst and pyosalpinx, abdominal section, removal of appendix, cyst and pus tubes, with recovery; a case of lymphosarcoma of the intestine simulating appendicitis, laparotomy, with recovery from operation. All these cases had been diagnosed as appendicitis and in all the symptoms pointed to trouble in the right iliac fossa. He remarks that these illustrate the difficulties that are and may be encountered in establishing a diagnosis in disease of the right side of the abdomen. Pain over the classic McBurney's point is not by any means always appendiceal in origin, and he suggests that when diagnosing appendicitis the other organs in the abdominal cavity ought to be examined.

22. **Tonometric Examination in Heart Disease.**—Schott's article dwells on the importance of an examination of the blood-pressure as a guide to the therapeutics of heart disease and illustrates from his own experience the use and value of the tonometer. While this is an instrument that may be dispensed with by the general practitioner, the physician who is desirous of making a minute and careful examination must use it. He says it may be considered a serious symptom whenever in any case undergoing the balneologic and gymnastic treatment the blood pressure is lowered. He has no hesitation in saying that when the tonometric figure as low as 65 or 60 mm. of mercury is found, therapy is of little avail and the bath and exercise treatment are both contraindicated. He believes that further careful experience with the Gaertner tonometer will fully confirm the statements and facts here given.

23. **Chronic Gonorrhea.**—The methods of treating chronic gonorrhea and post-gonorrheal urethritis are described by Valentine, who speaks particularly of certain points, such as the degree of dilatation and its duration, the need of asepsis, the question of involvement of the urethral adnexa, all the conditions that may tend to the chronicity of the gonococci, and the subject of marital reinfection. He offers the following conclusions: 1. That in these conditions, like all others, the cause of the perpetuation of the disease must be sought. 2. That no one remedy exists or can exist which will meet all the causative indications. 3. That the cause of a chronic urethral discharge is easily found, and when found can be successfully treated. 4. That the majority of chronic urethritides can be successfully treated by the general practitioner, and that the services of the specialist are required only in exceptional cases. 5. That the physician's duty is to warn all his patients of the dangers of gonorrhea to themselves, their family, and the public. 6. That no person who has had gonorrhea at any time should be allowed to marry until it is proven that he or she is free from the disease.

25. **Dietetic Treatment.**—The summary of Atwater and Benedict's article, concluded in this issue, shows that the four men under observation took a daily average of 154 grams of protein, 139 grams of fat, and 473 grams of carbohydrates, with a fuel value of 3925 calories daily per man. These figures correspond very closely with other observations of men under training and show that they take in their food about 50 per cent. more protein and 16 per cent. more energy than men at ordinary occupations in the United States whose dietaries have been studied. A comparison of the amount of nutriment in the food with those in the solid excreta shows the amounts actually available. These are nearly, but not quite the same, as the amount actually digested. It seems that the four athletes on an average digested their food just about as completely as the average man does. One notable feature of the experiment was found in the fact that the nitrogen excreted by the kidneys and intestines was considerably less in amount than the total nitrogen in the food. This means that there was considerable storage of nitrogen in the body, not far from 24 grams of protein per day, if no allowance is made for nitrogenous excretion in perspiration. Even after making a considerable allowance for excretion through the skin, it suggests the inquiry whether men who are storing nitrogen to such an extent are in the best physical condition and whether the amount of protein in the diet was the most appropriate for the purpose. The most important conclusion, however, to be derived from the experiments is, they say, that further and more detailed investigations are needed to show what diets are best for men under such muscular strain as that of oarsmen in training for races.

27. **Catharsis in Abdominal Surgery.**—The conclusions that seem to Crandon warranted from his study of the subject are: 1. In acute pelvic peritonitis both enemata and drugs by mouth should be used to produce catharsis before operation; drugs by mouth and oil enemata after operation. 2. In all acute inflammatory conditions of the abdomen where the alimentary tract is involved, the bowels should be moved by enemata alone, before and after operation, the enema of salts, turpentine and glycerin being the best.

30. **Pelvic Massage.**—After relating her experience with this method Southgate says: To sum up results obtained from my cases herein reported and others whose history I have not given you, pain and soreness in pelvis has been relieved; adhesions have been freed; exudates have been absorbed; large recent subinvolution was reduced; old chronically enlarged uteri have been rendered much smaller; enlarged fibrous ovaries have diminished slightly in size; retroverted, hypertrophied uteri, complicated with enlarged appendages and lax vaginal walls, reduced in size and retroversion somewhat improved; retroverted, prolapsed uterus without complications restored when electricity was added to the massage; severe dysmenorrhea of many years' standing, when caused by adherent ovary, cured.

31. **Rectal Valves.**—Mitchell reports a case where the existence of these valves was determined by proctoscopy, while the old methods had failed to reveal them.

38. **Surgery in Nervous Diseases.**—Pritchard doubts the value of surgery in functional nervous troubles and protests against the tendency of the surgeons to overstep their proper bounds in this direction. He concludes that in diseases of the brain, sinus phlebitis and traumatic hemorrhage, surgical procedure is not only legitimate, but is imperatively demanded. In brain tumors and in imbecility due to cranial deformity it has a legitimate field and while the results attained have not been specially gratifying, other remedial measures have resulted in no benefit whatever. Paralytic deformities, talipes, and contractions can be successfully treated by surgery alone. The loss of function may be completely relieved and useful action restored by muscle transplantation or section. Compression myelitis from trauma or other cause demands surgical treatment. Laminectomy is a legitimate procedure as demonstrated by results. In the treatment of neuroses, however, intrinsic or reflex, surgery is never a factor of any assured value. It may in exceptional cases prove a valuable adjuvant, but should never be relied upon alone. In non-reflex epilepsy the only excuse for surgical interference is that nothing else can be any worse. In reflex epilepsy and in other neuroses due to or aggravated by any ascertained reflex cause surgical removal of such reflex cause is legitimate, but the surgeon is wise who promises nothing. Among the sensory and motor neuroses surgery in the majority of instances seems a desperate experiment at best and often a crime. The domain of the surgeon in the treatment of epilepsy he believes is yet uncertain. Cautious, discriminating experimentation should constitute the guiding and dominant influence. While the ratio of failures to successes is large, he thinks that there is a future for surgery in this direction.

41. **Incudectomy.**—The mechanism in progressive hardness of hearing is given by Burnett, showing that the retraction of the incus is an important element and the operation of reducing the retractive force of the tensor tympani by incudectomy is recommended. The operation is made under general anesthesia and electric light with careful previous sterilization. When the membrane is intact the initial incision is made with a delicate knife, beginning close behind the short process of the malleus and following close behind the periphery backward and downward to a point below the line drawn horizontally through the umbo of the membrane. The flap thus made should be pushed inward toward the promontory by a probe armed with sterilized cotton. If there is no bleeding the incudostapedial joint is seen as soon as the flap of the membrane is pushed aside. If there be bleeding it must be mopped away. The incus being now in plain sight, it should be gently disarticulated from the stapes by drawing the former outward and downward by means of the incus hook-knife placed behind its long limb. Then the long limb of the incus should be grasped by special forceps and cautiously drawn down and outward into the auditory canal and then removed entirely from the ear. The operation is then finished. The meatus should be stopped with sterilized cotton and the ear let alone for twenty-four or forty-eight hours unless the meatus become moist with blood, when it should be changed. There should be no after-treatment in such cases. Sometimes slight reaction has occurred, but this is healed in a few days by simply mopping the ear with sterilized cotton and a solution of formalin (1 to 100), and he has never had any bad results. His experience with 78 cases has been good; the operation arrests and prevents progressive deafness and has a curative power in tinnitus and ear-vertigo.

51. **Intestinal Obstruction.**—The first duty in a case of intestinal obstruction is not to lose time in reaching a diagnosis or in instituting treatment. The essential phenomena are so striking to an observer as not to leave him long in doubt. In true ileus we have sudden and complete arrest of the fecal circulation indicated by sudden pain, vomiting, constipation, tympany, and stercoremia due to absorption through the paralyzed intestine, as shown by pale, drawn face, sunken eyes, a dark violet tinge to the skin, rapid, weak and small pulse, temperature normal at beginning, but later subnormal. The hopeless indication of these symptoms should be noted early, as the established conditions are unfavorable. Many physicians give cathartics, which Dunn condemns. Opium should not be given so as to mask the condition, though there is no other objection to its use. The most important thing where the obstruction is yet uncertain is the rational use of enteroclysis, using as much warm saline solution as possible with moderate pressure. This carefully conducted two or three times during the twenty-four or thirty-six hours will eliminate the existence of pseudo-ileus not requiring operation, and is not specially harmful in true ileus. The danger line for the patient should not be passed before operation is undertaken; ordinarily twenty-four to forty-eight hours should suffice. The various forms of internal strangulation should be watched for. These occur mostly in the middle third of life. Intussusception furnishes about one-third of the acute obstructions and usually occurs in patients under 10 years of age, and the discharge early of traces of blood in the stools is almost pathognomonic. Volvulus occurs in a large proportion of the cases of obstruction in the large intestines, hence, the diagnostic importance of inflation of the colon. In about 10 or 20 per cent. the nature and location of the obstruction remains more or less obscure to the best diagnostician, but the operator should not be very much embarrassed by this fact. Of the operations laparotomy is the one of choice, enterostomy being useful only in the last-resort cases. It is important that the operator should have everything at hand for any emergency and a definite system of handling pads, sponges, etc. Rapid work and the least possible rough handling of the intestine is important in advanced cases.

52. **Acute Nephritis.**—Head calls attention to definite types of symptoms of acute nephritis: 1. The gastrointestinal in which the attack is ushered in by vomiting, vomiting combined with diarrhea, or diarrhea alone. Over 50 per cent. of his 38 cases studied exhibit this type and he reports some of them as illustrations. 2. Next to this is the neurotic type, where the nervous system bears the brunt of the toxemia; the following symptoms occur; headache, sleeplessness, dyspnea, delirium, general or local convulsions and coma. About 28 per cent. of his cases were of this type. The two types just described are rarely seen associated. 3. This type is comprised of those cases characterized by the presence of edema, upon which so much stress has been laid by various writers. It is present in only 4 of his 38 cases. Edema is a much overestimated symptom of acute nephritis and has not the clinical importance attributed to it. Skin rashes are common enough as manifestations of nephritis to constitute the fourth type. In 3 cases of the 38 they were present, associated usually with edema. While as a rule striking symptoms are present, one sometimes meets with a case where there is no well-marked symptom to suggest the presence of the disease. This he calls the silent type of the disease, and he had about 5 of the 38 cases which he classed in this type. Other symptoms are enumerated, such as attacks of dizziness, abdominal pain, visual disturbances, epitaxis, etc.; these may occur but are not common and do not establish any special type of disease.

55. **Adrenalin.**—Todd reports a case in which adrenalin was injected to prevent hemorrhage in a case of operation for abscess in the neck, with the results that there was scarcely any bleeding, not enough to obscure the parts, though the patient in a previous operation had bled more than usual. The wound was packed with sterile gauze, but on removal from the neck this was unstained except where it had covered the cut surface, showing that there was no secondary hemorrhage. The adrenalin injections also had the effect of strengthening the heart, but otherwise there was no systemic disturbance.

56. **Tuberculosis.**—The object of Hunter's article is to call attention to a fundamental appearance of tubercular tissue not found anywhere else, viz., the presence of miliary tubercle. With this fact in mind one should not be left in doubt, he says,

in defining the tissue as to whether it is tubercular or cancerous.

58. **Psychotherapeutics.**—Patterson's article is an interesting historic résumé, and ends with a suggestion. He asks if the progress of the profession does not demand a judicious course in psychology as applied to the prevention, cause and cure of disease, to be added to the curriculum of medical instruction. Would it not be well to make a section of the state society (Michigan) devoted to the observation and study of the subject? Does not the dissemination of seeds of disease sent broadcast by mental suggestion in quack advertisements require local action for their prohibition?

62.—See abstract in THE JOURNAL, xxxvi, p. 127.

63.—Ibid., p. 127.

65.—Ibid., p. 127.

66.—Ibid., ¶ 26, p. 1893.

72.—See abstract in THE JOURNAL of June 8, p. 1650.

75. **Ureteral Retrodisplacements.**—The operations for the various conditions are enumerated by Coggeshall as follows: 1. The Alexander operation unmodified when there is retroversion or retroflexion without adhesions so that the uterus is replaced with perfect ease; if the woman is still of child-bearing age; if the uterus is not markedly enlarged by actual hyperplasia, and if the symptoms confirmed by bimanual examination with or without ether, indicate nothing wrong with the adnexa and no evidences of fibroids. 2. The Goldspohn operation under the following conditions: Whenever in performing the Alexander, the ligament is broken or difficult to find, and also in a large number of retroversions where we can not be positive about the non-implication of the adnexa or where we know that diseased tubes or ovaries need to be dealt with or adhesions to be broken up, always provided that the adnexa are not too large to be brought out through the enlarged ring. 3. Posterior colpotomy followed by an Alexander seems more convenient than the last mentioned operation, when there is a large degree of retroflexion with adhesions, or of diseased adnexa, but are not too large to be brought out through the ordinary posterior vaginal incision, and are also markedly prolapsed. It is also the best operation in cases of retrocession as the most important measure for the cure of this form of retrodisplacements is the free division of the uretero-sacral ligaments. 4. Where it is necessary for any purpose to open the abdomen by median incision, Gilliam's operation is the most convenient method of fastening the uterus in place except in cases where the round ligaments have undergone much atrophy. It has an advantage over doubling the ligaments on themselves, in throwing the thin distal portion of the ligament out of use, and depending upon the stronger proximal portion for support. It also changes their direction so that they pull more directly in the line required. 5. Where the round ligaments are not available, which hardly ever happens except in women past the menopause, ventral fixation may be employed. It is hardly ever the operation of choice, but one is sometimes driven to it by necessity. 6. Vaginal hysterectomy is in Coggeshall's opinion perfectly legitimate as a remedy for retroversion, especially with prolapse in women past the menopause, where there is marked atrophy of the vaginal wall, especially if there is any degree of ptosis of the abdominal organs generally. 7. The repair of lacerations of the cervix and perineum with the addition of anterior colporrhaphy where indicated, is a simple and effective means of treating moderate degrees of retroversion, especially accompanied with some prolapse in women who are not certainly past child-bearing or even in older women where neither atrophy of the deeper layers or vagina, nor enteroptosis is present. He does not believe that the present state of abdominal surgery has yet advanced to the point of so reducing the risk of opening the peritoneum to justify it where there is a very probable cure by a less serious operation.

78. **Myomectomy in Pregnancy.**—Emmet reports a case where nine myomata were removed during pregnancy without interfering with the processes and with labor and delivery at term. He thinks the lesson learned from this case is that hysterectomy may and should be avoided in all cases of myomata complicating pregnancy. If pregnancy were continued after so prolonged and irritating an operation as nine-fold myomectomy he can not see why myomectomy can not always be practiced with equally careful technique.

88. **Traumatic Epilepsy.**—Keen's article gives two cases of traumatic epilepsy operated upon, in one of which there appears to have been relief from operation. In the first there was a curious condition in which the cortex and white substance external to the posterior part of the lateral ventricle was entirely absent. The patient's mental condition before and afterwards was entirely normal. Whether the case was one of acquired porencephaly or whether there was simply destruction of the cerebral tissue between the ventricle and the dura at the time of the accident or by absorption later the author is unable to say.

89. **Pericardial Tuberculosis.**—The conclusions of Riesman are as follows: 1. Tuberculosis of the pericardium is comparatively common. 2. It may be primary in the clinical, rarely in the pathologic sense; it may be secondary. 3. The primary form is either a hematogenic infection or is the result of extension by contiguity from some trivial focus. 4. The most frequent source of infection is a tubercular mediastinal or bronchial lymph gland. 5. The primary form is usually chronic, and appears as an obliterative pericarditis. 6. In a large percentage of cases there is an associated mediastinitis, with adhesions to pleura, sternum, and ribs. 7. The symptoms are those of adherent pericarditis or mediastino-pericarditis. 8. In every case of obliterative pericarditis of obscure etiology tuberculosis should be suspected, particularly if there are no endocardial murmurs. 9. The diagnosis of tuberculosis of the pericardium can usually be made only by excluding other causes, except in rare instances of successful animal inoculation with fluid obtained by tapping a pleural cavity. 10. Tubercular pericarditis may not present any characteristic features at autopsy; hence, microscopical examinations should be made in every case of adherent pericardium before tuberculosis is excluded. 11. In rare cases a clinically primary tubercular pericarditis is acute, the exudate being serofibrinous, hemorrhagic, or purulent.

91.—See abstract in THE JOURNAL, xxxvi, p. 343.

92. **Gonorrheal Myositis.**—Ware reports a case of gonorrheal myositis with microscopic findings and discusses the literature, giving in brief the hitherto reported cases. He thinks that some permanent stiffening may eventuate in this case from the residue of connective tissue. He also is inclined to believe that the gonococcal myositis is an extension from similar inflammation of adjoining joints or the bones. The treatment is largely expectant and measures to relieve the pain, and when the acuity has abated massage. If the pain be excessive he thinks incision will often be of use.

95. **Progressive Muscular Dystrophy.**—Sachs and Brooks' paper reports a long-observed case with autopsy. They have specially investigated the spinal cord and find no evidences of tract disease. The occasional degenerated fibers in the posterior columns are probably ascending central branches of the degenerated spinal ganglion cells. The changes in the ganglion cells do not appear to them sufficient or of such a character as might be expected were the process a secondary one following long-standing muscular atrophy. They are inclined to consider them due to nutritional disturbances particularly affecting the mass of the cord following extensive and rapidly progressing curvature of that portion of the spinal column. The chief inference from the negative findings in this case is that there is not any evidence showing the disease of the muscles was due to disease of the gray or other portions of the spinal cord. Erb's theory should be regarded as purely speculative. At present there seems to be sufficient warrant to maintain distinction between the amyotrophies and the myopathies. It is difficult, however, to account for the latter group, unless we are satisfied simply to state that there must be some defect in the embryonal structure not permitting of satisfactory development of the muscular system. Two questions are raised: 1. Are all these cases of progressive dystrophy primarily muscular

disease or may not some of them be local expressions of universal lipomatosis? The case of a boy recently examined suggests apparently the latter possibility. 2. Are these muscular dystrophies necessarily progressive? The authors are inclined to offer a little hope from recent experiences. Two cases are reported in which there has been improvement at least.

108. **Two Unusual Surgical Cases.**—The cases reported are one of myoma with fibroid ovarian tumor, the first with only very obscure symptoms and the latter with none at all. The second case was one of ovariotomy in an extreme condition at the time of the operation.

114.—See abstract in THE JOURNAL, XXXV, p. 1172.

116.—Ibid., p. 1105.

117.—Ibid., p. 1171.

122. **Diet and Nourishment.**—The assumption that modern culinary art and the average appetite are essentially wrong is held by Benedict to be more dangerous than acceptance of our habits of eating without question. As an illustration of this he notices the tendency to prescribe in typhoid a dietary which would be insufficient and intolerable in health, which is deficient in carbohydrates and iron, which is constipating, which is an excellent pabulum for the colon bacillus and undoubtedly for the typhoid bacillus also. It is deficient in chlorid and almost lacking in material to stimulate the appetite or the digestive secretion. If milk is unavailable the next most orthodox nutriment is animal broth rich in toxic extractives, with which the emunctories are already overcrowded. On the other hand, we are told that a cracker or a piece of bread or toast is apt to reach the ileum as solid food and inflict mechanical damage. While there is no question that the diet of typhoid should be limited as to frequency and amount we should remember that milk is more truly a solid food than most bread stuffs or cereals, and that it is possible to come somewhere near satisfying the patient's needs and his appetite without puncturing his bowel needlessly or creating a chemical disturbance that may lead to serious results. Others advise a diet of concentrated proteids with small amounts of food stuffs in gastric affections and a diet rich in fats and vegetables in intestinal disease; amylaceous dyspepsia, he thinks, is a bugbear rather over feared. Nearly all rigid dietaries neglect the need of the system for a large amount of glucose. Meats are served in too great abundance. In most digestive disorders he thinks it better to allow well-fried meat or boiled meat and rare roast beef. In all hyperchlorhydric cases salt is to be avoided and in the reverse condition it is indicated. To a large extent the individual appetite should be consulted and we should remember in the diet as to meat that most patients take too much. Most soft, starchy vegetables can be given in moderate amounts except in diabetic cases, though not the best food for fevers. Vegetables with hard seed coats should be avoided in gastric stagnation; bulky vegetables containing little nutriment and much cellulose should be avoided in nearly all cases coming under the physician's care. All foods except fruits, nuts and milk are better cooked than raw, and he would almost make an exception of milk. The worst sins of modern cooking are overseasoning and preparations of doughy masses. Cake, pastry, etc., should be withheld in sickness. Good ice cream is wholesome. Fruits and nuts are generally fairly aseptic and many absolutely antiseptic. Gelatin is a harmless basis for appetizing dishes and somewhat nourishing as a fuel food. One of the best desserts is candy, but it has lost much of its credit from the fact that it is eaten to excess between meals. Other foods would also produce bad results under similar treatment. If eaten regularly as a dessert at dinner probably few persons would care to eat more than 10 to 25 grams at once. As it is, it is not uncommon for a person to consume ten times this amount between two meals. Most persons coming under the physician's care need to be warned against tea and coffee; also chocolate usually is taken too strong. Water should be taken freely, with the ordinary diet at least a quart daily, allowing a glassful at each meal. It is better that water should be drunk between meals and in small quantities at a time. With gastric dilatation and atony no water should be taken at meals and one to two quarts be drunk in small quantities at intervals beginning one hour or so after a meal. Alcoholic liquors are seldom indicated, the milder malt liquors do more harm to the stomach and bile by causing fermentation; the strong liquors expend their energy rather on the nerve centers and glands. Alcohol should have no place in the dietary unless the patient has been so accustomed to it that it is deemed inexpedient to withdraw it immediately.

124. **Acetanilid.**—Earp calls attention to the popular indiscriminate use of acetanilid and its occasional dangers. Fifteen grains, he says, is considered the maximum dose, but he has seen harmful symptoms from one-half of this quantity. Some authors advise that 3 grains every hour may be given with safety. He has seen patients follow this rule and reach the danger line before 15 gr. had been given. Therefore, while the drug has its value and good results can be obtained, he wants to emphasize the fact that extreme caution should be observed in its use. It is probably never indicated when the patient is in an enfeebled condition, but often robust patients are just the ones that show its toxic effects. He has seen cases of poisoning in the use of 8 grains of acetanilid in individuals who had quite frequently used larger doses before. We have little knowledge of its deterioration, and the possibility of an impure product being sent out should be considered. It has been suggested that acetanilid 'may be to some extent mixed with acetoluid and sold as the genuine article. He has observed that people who are quiet during the time that several doses are taken are more likely to suffer from untoward effects than those who have taken it during vigorous exercise. If small doses are given and there is a decline in the temperature and signs of depression, a cardiac stimulant given early will overcome the unfavorable symptoms. Most of the cases of poisoning are those in which some person has purchased the drug and self-administered it. In the use of acetanilid he observes the following precautions: "Under no circumstances do I give it independent of other agents for the relief of pain; if used for this purpose, codein makes a good adjuvant and it should be guarded by some cardiac stimulant. In the general use of this remedy accidents occur, because intervals between the doses are too short and quite frequently the second dose is given when the first one has accomplished the desired result. I instruct the nurse in the physiological as well as in the therapeutic action, and the appropriate antidotal measures. Under these precautions this positive agent need not be abandoned, and favorable results may be obtained with a comparative degree of safety.

125. **Thiosinamin.**—This agent (chemically, allyl sulphocarbamid, allyl sulpho-urea, rhodalin), prepared from oil of mustard, is discussed by Robinson, who notices the literature and its various uses. It has been given by the mouth and in capsules in .5 to 3 grain doses and hypodermically in a 5 to 15 per cent. solution, doses varying from one to three or four grains. The injections are painful, but not excessively so. It is used in skin disorders, and he says: 1. The beneficial effects of thiosinamin in cicatrices, keloid, chronic glandular enlargements, and lupus are undoubted. 2. The drug seems to possess a beneficial influence in corneal opacities and in deafness due to sclerosis and adhesions. Further testimony is needed in this direction. 3. The drug is claimed to have given good results in urethral stricture and in gynecologic affections; but the number of reports is small and further evidence is necessary. 4. Taking into consideration the softening and resorbent effects of the drug, it seems rational to believe that it would produce good effects in such conditions as hypertrophied tonsils, hypertrophied turbinates, and in various hypertrophies of the skin. A cautious trial of the drug in the above conditions seems highly desirable. 5. From the latest reports it appears that when used locally—applied to or injected directly into the lesion—thiosinamin produces a stronger and more prompt impression than when administered internally.

161.—See abstract in THE JOURNAL, XXXV, p. 1046.

187.—See also ¶ 38.

FOREIGN.

The Lancet, June 22.

On the Agglutinating Property of Blood-Serum in Cases of Plague. D. LOUIS CAIRNS.—After noticing the results of investigation of the agglutinating power of serum in plague cases, and the method employed to obtain the emulsion, which is too full to be given here, Cairns gives tables of the cases tested by him in the recent Glasgow epidemic, from which the following deductions appear fully warranted: 1. During the early days of the disease the reaction is not manifested, and consequently in rapidly fatal cases is probably never obtained. 2. Agglutinating properties first appear in the blood towards the close of the first week of illness (dilution of 1 in 10). These gradually increase in intensity up to the sixth week of illness, and are sometimes maintained at a high level as late as the eighth week. After this date, however, in the majority of cases, a gradual decline in the agglutinative power of the serum becomes apparent. The rates of increase and decrease of the reaction, generally speaking, are approximately equal; occasionally, however, the reaction wanes and disappears in a shorter period than that occupied between its appearance and point of maximum intensity. 3. In very severe cases ultimately proving fatal the reaction, though present, never reaches a high degree of intensity. In cases of almost equal severity, however, in which an early and rapid convalescence followed, the reaction was of more marked character. 4. In the mildest forms of plague a high degree of agglutinating power is probably never attained and in some it appears to be absent. Striker, in fact, states that the reaction never appears in this class of cases, but this is undoubtedly too sweeping an assertion, as an undoubted and characteristic reaction in a dilution of 1 in 25 was obtained in two such cases. 5. The reaction, as a rule, is most marked in those severe cases characterized by an early and favorable crisis, and in such cases it disappears very slowly, having been shown to be present as late as the fifth month after the primary illness. He remarks on certain mild cases that, notwithstanding the indisposition, was slight and the temperature sometimes only normal, they are as important as the severer ones as regards the danger to the community. In the severer forms of disease the possibility of serum diagnosis is much greater, but the diagnostic value of this agglutinative reaction is most important during and subsequent to the stage of convalescence when the possibility of bacteriologic diagnosis is more or less remote. In all cases, moreover, where there are glandular enlargements of dubious nature during the presence of plague epidemic the appearance of this reaction can not fail to be of signal value.

British Medical Journal, June 22.

Transplantation of Ureters into Rectum by an Extraperitoneal Method for Exstrophy of Bladder. GEORGE A. PETERS.—The case reported is that of a child aged 2 years and 7 months, suffering from ectopia vesicæ and procidentia recti. The procidentia was operated upon Dec. 7, 1896, incision being made in the median line above the imperfect umbilicus and consisted in making a longitudinal fold along the axis of the bowel, securing it by a double Lembert suture, thus narrowing its lumen and forming a fleshy column of the anterior fold of the rectum. This prevented the prolapse and recovery was satisfactory. The author reports it as a new operation and claims that it differs from any other in its essential features, consisting in narrowing the lumen of the lower dilated portion so as to make it practically impossible for the original apex of the protrusion to fall into it, and at the same time converting the part doubled in into a strong vertical fleshy column, the lower end of which is supported by the perineum, while the upper in turn supports the apex of the protrusion. He has operated since in another case also successfully. The exstrophy was treated also at another operation, nearly three years later. The sphincter was well stretched and the rectum previously cleared by a purge or enema of non-poisonous antiseptic solution. With the rectum blocked in its upper portion by a fair-sized sponge, a Jacques soft-rubber catheter, about No. 5 (English), was passed for about two inches into the ureter. The part containing the eye was cut off so that the urine entered the opening freely. A silk suture was then caught around the extreme end of the ureteral papilla, once or twice, and was also passed by a needle through the substance of the catheter so as to effectually prevent its slipping out, as it was the intention to retain these catheters in position at least forty-eight hours. Care was observed not to obstruct the lumen by passing the thread across it or by tying it too tightly. The distal end of the ureter with a goodly rosette of bladder muscle and mucous membrane was then dissected free, the catheter affording an excellent guide to its position. The idea was whatever virtue there might be in the peculiar termination of the ureter upon the inner surface of the bladder, should be retained when the transplantation was completed. As soon as the entire thickness of the bladder (here uncovered by peritoneum) had been snipped through with scissors, blunt dissection was employed and it was found not to be difficult to free the lower end of the ureter along the wall of the pelvis without injury to the peritoneum. Both of the ureters having been isolated, the whole of the bladder tissue was ablated from the perimeter where it merged into the skin, to the prostate where the vesiculæ seminales debouched. Great care was employed not to injure the peritoneum and in this case it caused no trouble. Next, the lateral aspects of the rectum, at a point below the reflection of the peritoneum, were exposed and the final step of the operation was the transplantation of the ureter into the lateral walls of the rectum, as follows: With a finger in the rectum the operator carefully determined the exact point where the implantation was to be made. It must be above the internal sphincter in the lateral and not in the anterior wall, to avoid kinking, and high enough to permit the ureter to project slightly, one-fourth or one-half inch, into the lumen of the bowel without stretching. As it is thus produced, it forms a papilla which, when pressed within the bowel, becomes converted into a valve, similar to that at the entrance of the bile duct and salivary ducts. This point having been decided upon, the operator or his assistant passes a slender forceps through the anus, presses them against it from the rectal aspect and lifts it across into the anterior wound. The wall of the bowel is now incised upon the projecting forceps, which are then forced gently through. By stretching and cutting, the wound is enlarged with great exactness, so as to exactly fit the ureter with its contained catheter and yet not squeeze them. The forceps are now opened, made to grasp the distal end of the catheter, and it is drawn into the bowel and out of the anus, the operator at the same time carefully directing the ureter through the slit and satisfying himself that its termination forms a papilla at least one-fourth of an inch long on the rectal mucous surface. In guiding the mouth of the ureter through the slit, the forceps may be passed back again beside the catheter and made to grasp the edge of the rosette of bladder tissue around the ureteral papilla. This process is repeated on the other side. The sponge plug is now withdrawn, care being taken not to disturb the catheters while so doing. No attempt was made to stitch the ureters in position. The catheters are left in position at least two or three days, or until they come away of themselves, which occurred in this case in about sixty hours. The author did not think it judicious to attempt any plastic operation for immediate closure of the abdominal wound. The whole area was surprisingly small and a moderately firm packing with iodoform gauze afforded efficient drainage and support, and acted as a splint to the ureters in their new position. Plastic closure may be done later when the implantation has healed securely and granulation been established. In this case the wound healed entirely by granulation and the scar was quite small and firm. It is now more than four years since the operation for procidentia recti was performed and about one and one-half years since the conversion of the rectum into the cloaca; the boy is in perfect health. There has not been the slightest tendency of return of the procidentia; there was no disturbance of function of the kidneys, and the mouths of the ureter could each be felt as a salient papilla as large as the tip of the little finger. There is no eczema or excoriation of anus or perineum, or any evidence that the rectum resists

the presence of urine. The frequency of defecation depends largely upon the amount of fluid ingested, and the degree of activity of the boy. There is no evidence of reabsorption of urine from the rectum and the cloaca seems to act habitually as a bladder and only performs the defecation function at such times as a movement of the bowels should take place under normal conditions. For this extraperitoneal operation the following advantages are claimed: 1. There is absolutely no danger of peritonitis. 2. A prominent natural papilla is secured. This is the natural manner of debouchement of a duct upon a mucous surface, and affords the best possible protection against spread of infection up the ureters. 3. The ureters are further protected against infection or sloughing by lying undisturbed in their natural environment almost to the point of implantation. 4. The operation is easy of performance, and practically free from shock and exhaustion.

Annales de l'Institut Pasteur (Paris), May.

Endoglobular Hematozoa in Reptiles. P. L. SIMOND.—An endoglobular hematozoon of the hemameba species was found in a fresh-water turtle, and other species were discovered in crocodiles. They differ in their species in the same proportion as their hosts. It seems probable from the facts observed, that each given species of reptile has a certain single endoglobular parasite. Two cases of simultaneous infection by two parasites were noted in one instance, but it is possible that both parasites belonged to the same species and were merely in different stages of development.

Intracellular Digestion in the Sea Anemone. F. MESNIL.—A fish or crab taken in entire by the actinia or sea anemone, is destroyed by intracellular digestion. The digestive cell in these animals represents the embryonal stage of what, in the higher animals, constitutes two distinct systems—circulation and digestion. The arrangement of the digestive cells and their pseudopodic and plasmodial properties renders possible the paradoxical phenomenon of complete intracellular digestion.

Annales des Maladies des Org. Gen.-Urin. (Paris), May.

To Prevent Recurrence of Stones in the Bladder. GUYON.—The task of the surgeon in case of stone in the bladder is far from being restricted to the mere removal of the stone. The accompanying cystitis must be cured and the recurrence of stones prevented. Experience has demonstrated that the presence of calculi is no obstacle to the attenuation, and even the cure of a cystitis, if it is secondary; also, that the removal of the stones does not necessarily cure it. Local treatment is imperative both before and after the operation, especially when the cystitis is old and severe. Instillations are usually all that can be borne at first, followed by fractioned irrigations as soon as possible. Some cases allow the irrigations to be commenced from the start, followed by instillations. Calculi do not contraindicate a permanent sound. If the bladder is painful or hemorrhagic it may be necessary to evacuate the organ without leaving it empty, replacing each portion of urine withdrawn by the same amount of a tepid solution of boric acid. This topical treatment may relieve without anodynes, but sometimes a suppository or injection of an opium or antipyrin solution may be necessary. This treatment of the cystitis may require one or two weeks, the criteria being the number of mictions, the capacity of the bladder and the acidity of the urine. The urine becomes less infectious and it is possible to avoid febrile accidents. Silver nitrate is the best of all measures. It seems to have an elective action on pyogenic bacteria, and on the uri-bacillus liquefians, and is especially active when the urine ceases to be acid. Silver nitrate restores normal acidity to the urine, and this is the most certain means to prevent the recurrence of secondary calculi. Mineral substances become insoluble in an abnormal urine. Patients operated on should be cautioned not to neglect to test the reaction of their urine frequently with litmus paper, and resume the silver nitrate if the acidity is diminishing, and continue it until the urine turns the litmus paper red. This opposes a chemical barrier to the causes of the precipitation of the phosphates. General hygienic measures are of great importance, avoiding alcohol and rich food, alkaline water, and the tartrates of lime and magnesia, and a diet too abundant in vegetables. The patients should return once a week for repeated verification and successive evacuations.

Bulletin de la Soc. Med. des Hopitaux de Paris, May 30.

Gonorrheal Peritonitis in Little Girls. J. COMBY.—In case of diffuse peritonitis in little girls, the external genitalia should always be carefully examined. If evidence of vulvovaginitis are discovered, this suggests the possibility of a gonorrheal origin. Comby had three cases under observation nearly at the same time, and was on the point of operating each, supposing that the diffuse peritonitis was the result of a perforating appendicitis, when the discovery of the gonorrheal lesions altered the diagnosis and with it the treatment. This form of peritonitis, in spite of its alarming onset, terminates in rapid recovery without surgical intervention.

Diagnosis of Nervous Affections from the Cerebrospinal Fluid. BABINSKI.—Examination of the cerebrospinal fluid in 120 persons resulted in finding the fluid normal in 60 cases, numbers of polynuclear cells in 1 case, and lymphocytes in great abundance in 56 cases, and scanty in 3. In the 56 persons who showed marked lymphocytosis, 50 were patients exhibiting symptoms which we associate with generalized syphilis—that is, tabes, general paralysis, Robertson's sign, isolated or accompanied by hemiplegia or paraplegia, or progressive muscular or pupil atrophy. In the remaining 6 cases there was some basis for the diagnosis of an affection of this kind, and it has developed since.

Intestinal Obstruction from Large Gall-Stone. TROISIER.—An obese woman of 60, who had never had an attack of icterus, nor of hepatic colic, exhibited all the symptoms of acute intestinal obstruction for eight hours. Soon after, a gall-stone, measuring 7.5 cm. in circumference, was evacuated in the stools. It was 25 mm. thick and weighed 7 gm. dry. The size and the absence of icterus precluded the assumption of the passage of the stone through the bile duct. It must have entered the intestine through a cholecysto-duodenal fistula. No symptoms appeared during the three years since.

Echo Medical (Lille), May 26.

Sphenoidal Sinusitis. GAUDIER.—A man applied for relief from an unbearable headache, which appeared every morning about 2 a. m., and lasted until about 5, when it ceased. The pain always started in the side of the right eye, ear and jaw, with subjective pulsation through the entire head. Two days before applying to Gaudier he had noticed a drop of pus when he blew his nose at 5 a. m., and the pains vanished about this time. He had no occasion to blow his nose nor expectorate at other times. In order to examine the sphenoidal sinus, the lumen of the meatus must be enlarged if necessary, and a droplet of pus will confirm the suspicion of sinusitis. Prompt cure follows the evacuation.

June 16.

The Country Physician in an Epidemic of Diphtheria. H. DELBECQ.—The epidemic described was in a fishing hamlet where the lack of means and intelligence rendered local treatment impossible. Delbecq therefore renounced all attempts of the kind and relied solely upon serum treatment. All of the 19 cases recovered except 3, first seen in a moribund condition. The persons exposed, 65 in all, were injected with 5 to 10 c. c. as a preventive measure. The success of the serum treatment was remarkable. In one case a woman coughed up a perfect cast of the trachea and bronchi, to the fourth subdivision with seven ramifications on the left, and to the third with six ramifications on the right. The lumen of the tubular cast extended into the finest ramifications. The patient had been injected but once, receiving 20 c. c. of Roux's serum. Delbecq made a bacteriologic examination in 16 cases, placing the culture tube under the wing of a hen, with its feet tied together, in a box covered with a cloth, in order to maintain a constant temperature of 37 C. He did not order the school to be closed, but allowed it kept open after having the building disinfected, as he believed that the children, if allowed to play all the time, would be more liable to

contract colds which would favor the evolution of diphtheria, than if they were kept regularly in school.

Journal de Medecine de Paris, June 9.

Role of the Lymphatic Glands in Infections and Diatheses. COURTOIS-SUFFIT.—Recent research, clinical and experimental, tends to establish that, from the physical, chemical and anatomic points of view, the lymphatic gland represents a true differentiated organ, intrusted with the task of defending the animal organism against both microbes and their toxins. It arrests the passage of bacteria and attenuates their virulence, while it is one of the places where the antitoxin is produced. The alterations in the glands are of two kinds: The first are manifestations of their functional activity, and are evidences of the struggle against the infection; the second are purely passive and are produced only secondarily, when the resistance of the ganglion has been overcome by the action of the infectious and toxic agents. A sound gland may, therefore, be hypertrophied from its excessive functional activity, or the increase in size may be due to infiltration with microbes or tuberculosis, or to cancerous degeneration. The simple hypertrophy of glands in the vicinity of a malignant neoplasm is a premalignant or paramalignant alteration. It is the reaction of the glands to the toxic products secreted by the neoplasm, and is for the purpose of producing unusual amounts of leucocytes, which pass into the lymph passages, and thence into the general circulation, explaining the leucocytosis observed in case of malignant disease. It precedes the appearance of specific cells in the ganglion. The glands in the vicinity of the neoplasm may also be infected by secondary pyogenic microbes or by tuberculosis. The relations between malignant disease and suppuration are well known, and the septic germs may be disseminated by the blood or lymph. Malignant disease passes through three phases—a local, a lymphatic, and a final, general circulation phase. According to Soupault and Labbe's latest statistics, the average number of cancerous ganglia in case of malignant disease of the mamma is 5, non-cancerous 2; of the stomach, liver and pancreas, cancerous 9, non-cancerous 5; of the peritoneum, cancerous 1, non-cancerous 2; of the tongue, cancerous 0, non-cancerous 4; of the tonsil, cancerous 4, non-cancerous 1; of the larynx and lungs, cancerous 2, non-cancerous 2; of the bladder and uterus, cancerous 0, non-cancerous 3. Youth favors metastases to the glands, owing to the greater activity of the lymphatic system during the first third of life. The nature of the tumor has also great influence on the early development and importance of secondary adenopathy. The participation of the glands in the cancerous process is more frequent and earlier in proportion as the tumor abounds more in epithelial cells and connective tissue is scanty. The remote adenopathy sometimes observed in case of malignant disease, usually affects the inguinal, axillary and supraclavicular glands. Tumefaction of the inguinal glands is too common for it to have any diagnostic value. The supraclavicular glands were affected in 21 out of 26 cases of malignant disease of the alimentary canal, and in 17 out of 37 cases of subdiaphragmatic visceral carcinoma. This frequently occurs also with carcinoma of the intestines, liver, kidneys, and suprarenal capsules.

June 16.

Action of Ozone on the Hemoglobin and Red Corpuscles. OUDIN.—During the last twelve years Oudin has been making a special study of the influence of ozone on certain affections. He finds that it is unquestionably superior to all other therapeutic measures in its effect on the numbers and quality of the blood corpuscles. He describes three typical cases, showing the improvement obtained in six to eight weeks of ozone treatment. The first was a case of tuberculosis, with 7 per cent. oxyhemoglobin, 2,500,000 reds and weight 57 kilos. After six weeks of ozone treatment the proportion of oxyhemoglobin was 12 per cent., the number of reds 4,700,000, and the weight had increased by 5 kilos. The second case was that of a patient with chloroanemia, weighing 35 kilos, with 3,700,000 reds and 6 per cent. hemoglobin. After treatment the weight was 42 kilos, the number of reds 4,350,000, and the proportion of hemoglobin 10.5 per cent. The third patient was a victim of lead poisoning, with anemia and paralysis, weighing 50 kilos, with 5 per cent. oxyhemoglobin and 1,500,000 reds. After two months of ozone treatment, the weight had increased to 59 kilos, the reds to 5,200,000, and the proportion of oxyhemoglobin to 13 per cent. This effect on the oxyhemoglobin is perceptible even after the first inhalation.

Presse Medicale (Paris), June 15.

Therapeutic Puncture of the Sacral Canal—"The Epidural Method." F. CATHELIN.—This new method of spinal injections is not meant for spinal cocainization only, but is advocated as a superior method of administering the majority of soluble medicines now administered by the mouth, rectum, or injected under the skin, or into a vein. The drug, in a weak solution, is introduced into the sacral canal and is thus brought at once into contact with the extensive plexus of veins which lines almost the entire bony structure. The absorption of the drug, therefore, proceeds simultaneously over a large surface, and its effect is felt to the remotest ramifications of the vascular system. For cocainization Cathelin injects on an average 4 cg. of a 1 per 100 or 200 solution of cocain. The method has already scored a number of brilliant successes in the palliative treatment of neuralgias in the legs, sciatica, lumbago, the fulgurant pains and gastric crises of tabes and also in intercostal neuralgia. It must also prove useful in cases of inoperable malignant disease of the rectum, of hemorrhoidal fissures, in painful delivery, and affections of the joints without effusion. It may be utilized for the administration of large doses of chloral in tetanus, or of the soluble mercurial salts, the benzoate or cyanid, for instance, in the severe cerebral or spinal form of tardy syphilis. The epidural injection is simpler and less dangerous than an intravenous injection, and never causes the local nodules, while its action is fully as effective, to say the least. The patient in the knee-chest position, the needle is inserted obliquely between the lower tubercles of the sacrum, just below the lowest median tubercle, where a triangular depression is evident. As the needle is introduced, it is slanted forward toward the anterior wall of the canal. There is a sensation as of forcing it through a taut membrane; when this is passed, the point of the needle is raised to follow the median line, and inserted for three to five centimeters, giving the sensation of passing through a soft substance. The fluid is then injected very slowly and the hole closed with a drop of collodion. The nerve roots are not affected by this procedure. The drug acts by osmosis through the extensive intraspinal venous network, which fills up the entire epidural space, as Cathelin has recently established by injecting colored wax and other substances under pressure.

June 19.

The Epidural Method. M. BROCARD.—Sicard claims the priority of this new method of spinal injections, as he announced it at the meeting of the Société de Biologie, April 20, while Cathelin's communication was not presented until the following week. The three tubercles where the spinal canal is left exposed near the end of the sacrum, owing to the non-development of the laminæ and spinous processes, is the point for the puncture, a little above the line uniting the two tubercles. It can be approximately determined by measuring 7 cm. from the tip of the coccyx in the adult. The sacral canal at this point has a transverse diameter of 15 to 18 mm.; the antero-posterior diameter is 8 to 10 mm. The tip of the cone formed by the dura is 7 cm. above, out of reach of possible injury. The tolerance of the spinal canal outside the dura for non-toxic fluids is remarkably great, and experiments with stains injected in the cadaver showed that the fluid rapidly spreads through the entire epidural space in the dorsal and even cervical region. Cathelin's assumption that the drug acts by absorption through the vast plexus of veins in this space is probably correct, but there must be, besides this, some vasoconstriction phenomena, and also some effect on the nerve substance direct. Chipault has the patient assume the Trendelenburg position to facilitate the dissemination of the fluid, but Sicard prefers the lateral decubitus on

the affected side, the legs flexed on the thighs drawn up to the pelvis, until the knees touch the chin.

The general direction of the puncture is that of the buttocks groove and Brocard and Chipault insert the needle for 4 to 5 cm. It hits against the coccyx if introduced too low, and against the roof of the sacral canal if too high, but in either case no damage is done. If the needle is held too upright it injures the periosteum of the floor. Nausea, fever, and headache never accompany this method of injection. The only symptoms observed were a sensation of heaviness in the limbs and very rarely formication, extending to the toes. Four or five hours after the injection a sensation as of a bruise is experienced in the lumbar region, gradually subsiding during the night. The analgesia obtained by spinal cocainization by this method never affected the skin, and it is, hence, exclusively medical analgesia. The relief of pain is immediate; it vanishes in two to five minutes after the introduction of the fluid. The analgesia obtained lasts for two or three days. The pain is then liable to reappear, but in the experiences to date, each recurrence is less violent and progressive improvement can thus be attained, amounting to actual cure. Colleville has cured three severe cases of sciatica by injecting a mixture of guaiacol 6 gm., orthoform .5 gm., and benzoic acid .365 gm. in almond oil q. s. to make 60 c. c. Chipault found the analgesia after cocainization by this method sufficient to allow resection of the coccyx.

The Cerebrospinal Fluid After Spinal Cocainization. RAVAUT and AUBOURG.—After spinal cocainization in Guinard's service, if the headache is intense a second puncture is made and a certain amount of cerebrospinal fluid allowed to escape. The relief is evident, and it was observed that whenever there was much headache the fluid spurted as if under high pressure, while it oozed a drop at a time when the headache was minimal. The turbidity of the fluid was also proportional to the amount of headache. The fluid of patients with severe headache contained large numbers of polynuclears, but a slight increase was noted in every case. Repeated lumbar puncture of the patients who exhibited most marked symptoms showed that the polynuclears gradually diminished in numbers and were replaced by lymphocytes and mononuclears, the fluid becoming normal again by the end of eight to twenty days. Repeated tests demonstrated that the meninges show no traces of the cocainization, resuming their normal condition in every respect after this interval. The reaction at first is evidently due to the direct toxic action of the cocain. Some of the patients were injected with the cocain dissolved in their own cerebrospinal fluid drawn just previous to the operation, but the symptoms were the same as when distilled water was the vehicle. The disappearance of all traces of the reaction testifies to the complete recuperation of the meninges and the ultimate harmlessness of spinal cocainization.

Deutsche Med. Wochenschrift (Berlin and Leipsic), June 20.

Treatment of Tuberculosis with Tuberculin. GOETSCH.—It seems highly irrational to Goetsch to increase the fever with repeated injections of tuberculin when the patients are already febrile. He consequently never administers it when the patient has fever, and thus his patients are not exposed to the so-called dangers of tuberculin. He commences with very small doses and proceeds very slowly and cautiously, with the result that the nine patients thus treated during 1891 lost their bacilli and recovered their health. The three following years no patient was willing to take the tuberculin treatment owing to the general disfavor into which it had fallen. In 1895, however, tuberculous persons who had witnessed the complete recovery of his first nine patients, or been sent by them, applied for tuberculin treatment, and he was thus able to apply his principles on a large scale, the number of patients increasing each year, until he had 110 during 1900, a total of 224 in all. Of this number 37 are still under treatment, and of the remaining 175, 125 can be considered cured. The others were satisfied with the improvement attained, or for other reasons did not complete the cure. Tubercle bacilli were found in the sputum in 88 out of 224 who applied; 12 were rejected as being in too advanced stages of the disease. In 1 bacilli were discovered in suppurating cervical glands. The average length of treatment was 198 days, ranging from a minimum of 50 to 791. The average for patients with pulmonary tuberculosis was 143 days. The patients gained from 8 to 40 pounds in weight, averaging 19. Most of the cured cases return occasionally to allow oversight over their progress. A detailed record has been kept of each case, the weight, temperature morning, noon and evening, and the dose injected. The injections are made twice a week. During the first year Goetsch abstained from all adjuvants in order to test the tuberculin more thoroughly, but since convinced of its efficacy, he supplements it with the usual hygienic and other measures, but does not find that the course of treatment has been materially shortened thereby. As he never injects while the patient has fever, the temperature is reduced to normal by rest in bed and wet packs. If it is impossible to abolish the fever, tuberculin treatment is contra-indicated. No patient is submitted to this treatment whose case does not offer chances of success. Treatment is begun the third day, the dose corresponding to the general condition, usually .0001 gm. of old tuberculin. He has never succeeded in banishing the bacilli with the new tuberculin alone, although he has administered as much as 20 mg. at a time of T. R. in a number of cases. If this dose causes a febrile reaction, he reduces it by .00001 gm., and if this is not supported, he replaces the old by the new tuberculin, T. R., which is usually tolerated in the dose of .001 mg., and has proved its usefulness as a preliminary to the other. As soon as 1 mg. of T. R. is reached, then .0001 to .001 of old tuberculin is injected and tolerated without reaction. By gradually increasing the dose it is possible to raise it to 1 gm. of old tuberculin. The bacilli and cough have long disappeared by this time, the weight is normal, and the physical signs have subsided. But this result can be accomplished, Goetsch emphasizes, only by making it a principle never to increase the amount until the last dose was tolerated without a febrile reaction. He also, especially at the commencement of the treatment, insists that the patients must remain in bed forty-eight hours after the injection, to diminish the chances of a febrile reaction. The visible effect of the tuberculin in cutaneous tuberculosis is an intense redness and swelling of the affected points. In glandular tuberculosis the glands swell after each dose of the tuberculin, but subside again in two or three days. This same phenomenon is observed in affected tonsils, rendering their removal necessary in some cases. Patients with pulmonary tuberculosis frequently experience sensations as if a similar phenomenon were occurring in their lungs, and are able to locate the lesion. Hemoptysis seldom recurs and is less abundant. Fresh hemorrhages were never observed in any patient. The night sweats vanish during the third or fourth week of treatment. Four typical cases are described in full with nearly four pages of the tabulated temperature, dose, weight, and date, which it requires no knowledge of German to understand at a glance. The first is that of a teacher of 21, whose mother had died of tuberculosis: bacilli in sputum when admitted Jan. 4, 1898. He was dismissed cured April 4, with a gain of 34 pounds in weight and an additional gain of 15 pounds since. The first dose was .001 gm. and the last 1 gm. of old tuberculin. The temperature was occasionally 37.1 during the first twelve days. The second patient increased 21 pounds in weight during the treatment, which lasted five months. The table shows how the dose had to be frequently reduced as a febrile reaction occurred, the highest temperature being 38.8 C. These patients were examined recently by Professor Kast, who found them both perfectly sound. Koch supplements this communication by emphasizing the folly of administering tuberculin in cases of mixed infection, especially with suppurative processes. The specific action of the tuberculin is lost in such circumstances. He has always warned against too violent reaction, but, as he remarks, "Goetsch has gone beyond this and avoids any reaction at all, as far as possible, and yet he is able to reach very large doses. He has obtained remarkably good results by this method of procedure, as I recently convinced myself

by a personal visit to his sanitarium. In order to incite other physicians to similar attempts he prepared the above communication for publication at my request."

[See editorial in last week's issue.]

Therapie der Gegenwart (Berlin), June.

A Cured Case of Aortic Insufficiency. H. SENATOR.—A cigarmaker, born in 1831, with a history of gonorrhea and syphilis at 20, was exhibited in clinics as a typical example of aortic insufficiency, in and after 1868, and the records contain several detailed descriptions of his symptoms, the classic picture of aortic insufficiency complicated by a tubercular lesion in one lung. Senator's astonishment may be imagined when, in 1871, he examined the man again to find not a single indication of aortic insufficiency, and the supposed tubercular focus in absolute *statu quo*. Repeated examinations convinced him that the valvular lesion must have healed, and that the tubercular focus must have been merely a syphilitic induration. The autopsy in April, 1901, confirmed this diagnosis. Only two semilunar valves were found at the orifice of the aorta, one evidently formed of two that had grown together. The valve was watertight. The pulmonary lesion was an induration with a patch of thickened pleura to correspond. Nothing was found to suggest an explanation of the fact observed during life that the systolic murmur had been loudest over the pulmonary orifice. The murmur must have originated at the orifice of the aorta in consequence of an eddy produced in the blood stream by the thickening and excrescences of the valves, but it was heard loudest over the pulmonary orifice for some inexplicable reason. The clinical records between 1877 and 1881 mentioned that the clinical picture had slightly altered. Two sounds were heard over the carotid, an indication that a diastolic sound was being developed at the aorta. Later it was noticed that two sounds were audible over the aorta, and that a murmur accompanied the second sound. Cured valvular lesions are rare and usually they are defects of the mitral valve, and always in young persons. In this case the man was 33 years old when it was first noted, and he survived thirty-seven years, living in poverty and never treated for the valvular affection. Treatment was always directed to the pulmonary lesion. No disturbances in compensation were noted at any time. His death was due to a circumscribed, comparatively recent tubercular lesion, causing hemoptysis. Senator was unable to find more than two cases of cured aortic insufficiency in the literature, in one the patient was 20, in the other, 37 years of age.

Treatment of Tetanus. E. LEXER.—Bergmann has lost confidence in serum treatment of tetanus and relies upon amputation as his chief support. Several fatal cases have been published recently in which all the conditions of early injection, etc., had been complied with. Lexer describes a case in which symptoms of tetanus appeared the sixth day after a compound fracture of the arm with an extensive phlegmon. Serum from Berne was injected into the veins and lateral ventricle, at the same time the arm was amputated close to the shoulder. The injections of serum were continued for several days, alternately subcutaneous, intravenous and cerebral. The temperature was continuously 40 C. An improvement for two days was followed by extremely severe symptoms, which gradually subsided in the course of two weeks and the patient had completely recovered by the end of four more.

Influence of Diet on Childbirth. W. BOKELMANN.—In the *Centralblatt f. Gyn.*, 1889, 33, Prochownik recommended that women during the last few weeks of pregnancy confine themselves to antidiabetic diet, in order to check the development of fat in the fetus and render the bones more compressible. Bokelmann has followed these directions and proclaims, after an experience of eight years, that the advice is sound, and that women with contracted pelves, or who have previously given birth to exceptionally large children, or elderly primiparæ, are liable to derive the greatest benefit from this measure. Of course it is impossible to guarantee an easy birth in all cases, but the chances are decidedly in favor of it. He modifies Prochownik's directions to a certain extent, commencing the dieting gradually during the last third of the pregnancy and gradually growing stricter toward the last month. Water, soup, potatoes, sugar and beer are forbidden, although a moderate amount of carbonized water may be taken between meals. Sugar can be substituted by a small amount of saccharin. The woman may eat freely of meat, eggs, fish, green vegetables, cheese, a limited amount of bread, but butter *ad libitum*. As a beverage, 300 to 400 gm. of red or Mosel wine. The women usually feel so unusually well, subjectively, on this diet, that they bear its deprivations with pleasure. There are no unfavorable consequences for either mother or child. The children are certainly leaner, the bones of the head offer less resistance and artificial assistance is less frequently required. Another favorable effect is the more vigorous action of the uterine muscles: the diet is similar to that followed in the training of athletes, and it has a generally favorable action on the entire muscular system.

Oxygen in Therapeutics. F. KLEMPERER.—The benefits of the inhalation of oxygen are probably due to its direct action on the nerve centers. Michaelis has used about 150,000 liters of oxygen on his patients, and, with but one exception, has always noted a more or less marked subjective euphoria follow its use. The pulse and respiration become slower and more regular, and the same effect is observed in idiots and in comatose patients, excluding the effect of suggestion. Inhalations of oxygen have proved useful in intoxications and in dyspnea—it is an actual antidote to carbon dioxid—and, also, in intoxications from exhalations in mines and tunnels. It has been recommended for methemoglobin intoxication. Michaelis cured a case of morphin poisoning by this means, the patient being in profound coma and breathing only by artificial respiration. Spontaneous breathing followed the first inhalation of oxygen, and every time the respiration grew weak again, the oxygen restored it, strengthening the pulse and diminishing the cyanosis. Strychnin intoxication is also favorably affected by oxygen. After saturation of the blood with oxygen, it is impossible to induce convulsions in animals with strychnin or other reflex poisons. These inhalations have been advocated recently also for alcohol intoxication and in chloroform narcosis. Dyspnea is the second great indication for the inhalation of oxygen. Babinsky has reported the case of a girl of 13 suffocating from a piece of food in the trachea. The dyspnea and cyanosis were extreme, but the inhalation of oxygen raised the pulse and the lips became red. The transient restoration of circulation in such cases or with tracheal or laryngeal stenosis from compression by the thymus, may tide the patient past the danger point. The benefits of oxygen in bronchitis, emphysema and asthma are generally known, but in pneumonia or pleuritis, the compression or infiltration of the lung prevent the absorption of the oxygen. Cardiac asthma is favorably modified by the oxygen and likewise severe asthma caused by the compression of an aneurysm. Aside from intoxications and dyspnea, the benefits reported from the use of oxygen are probably due more or less to suggestion, as, for instance, the favorable effects in a few cases of chlorosis, nervous vomiting, the vomiting of pregnancy and uremic conditions. Anemia, leukemia and diabetes did not seem to be affected by the oxygen.

Calomel as a Diuretic. KLEMPERER.—On account of its marked diuretic properties, calomel is indicated in heart and lung affections and in dropsy, but for the same reason it is directly contraindicated in albuminuria and nephritis.

Therapeutic Inhalations on a Large Scale. ADAM.—At the Flinsburg sanitarium the guests pass half an hour morning and evening in rooms in which the air is impregnated with salt solution, then with the essence of pine needles, and then with that of balsam fir, ten minutes in each. This is followed by a bath and a walk. The benefits are both local and general, and twenty years of experience have confirmed the efficacy of the inhalation of resinous fumes as a tonic measure. Adam suggests that shallow tanks filled with pine needles and fir twigs, with a stream of water trickling through them, on the principle of salt-evaporating pans, might prove a useful adjunct to city hospitals or spas.

Centralblatt f. Chirurgie (Leipsic), June 8.

Instrumental Application of Ligatures. M. KATZENSTEIN.—In order to avoid all contact with the fingers in applying ligatures, Katzenstein has devised a set of instruments which apply a wire ring to the vessel and then crush it flat, thus mechanically occluding it. When he wishes to close the lumen of an intact vessel he applies an oval ring, l, fig. 1, with a straight clasp in the center, like a buckle, which compresses the vessel firmly and completely. When a vessel has been severed, a ring is slipped over the stump and with a Péan forceps, the ring is crushed flat, thus holding the lumen

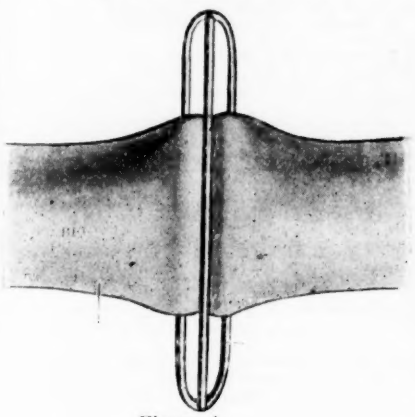

Figure 1.

Figure 2.

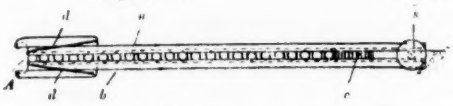

Figure 3.

Figure 4.

tightly occluded, fig. 2. These rings are mounted in a grooved slide, fig. 3, with a spring, "c," and thumb-screw, "s," at one end, tapering at the other to fit into the jaws of the Péan forceps "a," which is provided with a spring on one side, "f" fig. 4, to hold the ring, "a," firmly until passed over the vessel stump, fig. 2. Open loops can be used instead of rings, with a suitable slide and the jaws of the Péan grooved to correspond to hold the loops. A year's experience with these instruments has confirmed their great value in asepsis and time-saving.

Gazzeta Degli Ospedali (Milan), June 16.

Amyl Nitrite as Antidote for Spinal Cocainization. A. CORDERO.—This communication advocates the administration of amyl nitrite to diminish the disturbances due to cocain anesthesia by the lumbar route. The pallor and cold extremities of persons submitting to cocain anesthesia indicate that the drug has a pronounced vasoconstricting action. Amyl nitrite has a marked vasodilating effect and Cordero conceived the idea that the nitrite would counteract the vasoconstriction. Schilling some time ago suggested amyl nitrite as an antidote for cocain poisoning. After the injection of the cocain, the patients inhale three of four drops of amyl nitrite on a fold of gauze. The face becomes red, the pupils contract, and this condition of slight congestion of the head is kept up by administering a few more drops of the nitrite, if necessary, to a maximum of twenty. Twenty-seven patients thus treated escaped the usual after-effects of cocain; there was no severe vomiting nor violent headache. Nine were apyretic and the temperature rose to 38 C. in only two. There was slight nausea in a few cases, but all the patients were completely restored the next day with good appetite. Cordero considers himself justified in recommending this procedure as a reliable means of preventing the disagreeable consequences to which spinal cocainization is liable. He injects 6 to 9 mg. of cocain in a .5 per cent. warm solution, which he finds sufficient for all operations below the umbilicus.

Vratch (St. Petersburg), May 25.

Syphilitic Endocarditis. M. Y. BREITMANN.—From his own observation and reviewing the literature on the subject, Breitmann is convinced that there is no such thing as a primary inflammation of the heart valves and proliferation, of exclusively syphilitic origin, in the condylomatous stage. Syphilitic alterations in the endocardium occur only in the tertiary stage, and are merely gummatous processes propagated from the myocardium. They can, however, simulate the clinical picture of a primary cardiac defect.

Genu Recurvatum. A. WOROBJEFF.—On the foundation of ten personal cases, which are described in detail, with several illustrations, Worobjeff classifies this condition as neurotic or osteopathic in origin. To the neurotic class belong the paralytic and arthropathic varieties and to the osteopathic the genu recurvatum resulting from a fracture or rhachitis, osteomyelitis, tuberculosis or syphilis. Determination of the cause is important both from the theoretical and practical point of view.

Auto-Amputation of the Appendix. P. D. WEINGROW.—In a case of suppurative peri-appendicitis, the appendix became spontaneously amputated and was evacuated through the rectum eleven days after the onset of the acute infection. It occurred in the midst of robust health, the patient a man of 37.

Revista Medica de Bogota, Colombia, No. 251.

Analogy Between Yellow Fever and Snake-bite. N. OSORIO.—The close resemblance between yellow fever and the symptoms that follow the bite of a venomous serpent suggests that the toxins in each may be identical. The anatomic lesions certainly seem to be identical in each. Especially remarkable in this respect is the degeneration of the liver cells, although it is much more rapid after a snake-bite than in yellow fever, in which the toxins have first to be elaborated, while in the snake-bite they are introduced *en masse*, already manufactured. Osorio thinks that researches in the line of reciprocal immunization with these toxins might lead to important results.

Books Received

SURGICAL EXPERIENCES IN SOUTH AFRICA, 1899-1900, Being Mainly a Clinical Study of the Nature and Effects of Injuries Produced by Bullets of Small Caliber. By George Henry Makins, F.R.C.S., Surgeon to St. Thomas' Hospital, London. Cloth. Pp. 493. Price, $4.00 net. Philadelphia: P. Blakiston's Son & Co. 1901.

SELECTED RESEARCHES IN PATHOLOGY. By Alex. Gunn Auld, M.D., M.R.C.P., Author of "The Pathological History of Bronchial Affections, Pneumonia and Fibroid Pneumonia." With Illustrations. Cloth. Pp. 153. Price, $2.10 net. London: J. & A. Churchill. Philadelphia: P. Blakiston's Son & Co. 1901.

DISEASES OF THE THYROID GLAND AND THEIR SURGICAL TREATMENT. By James Berry, B.S., Lond., F.R.C.S., Surgeon to the Royal Free Hospital and Lecturer on Surgery at the London (Royal Free Hospital) School of Medicine for Women. Cloth. Pp. 367. Price, $4.00. Philadelphia: P. Blakiston's Son & Co. 1901.

MANUALE DI CHIRURGIA OPERATORIA. Dei Dottori R. Stecchi e A. Gardini. Con 118 Incisioni. Cloth. Pp. 321. Milano: Ulrico Hoepli. 1901.

MICROBOLOGIA. Perche e Come Dorbiamo Diferderci dai Microbi, Malattie Infettive, Disinfeziono, Profilassi. Dott. Luciano Pizzini, Direttore del Laboratorio batteriologico del l'Ufficio d'Igiene di Bergamo. Cloth. Pp. 141. Milano: Ulrico Hoepli. 1901.

IGIENE DELLA BOCCA E DEI DENTI. Nozioni Elementari di Odontologia. Con 23 incisioni nel testo. Dott. Ludovico Couilliaux, Libero Docente di Odontoiatria nella R. Universita di Parma. Cloth. Pp. 298. Milano: Ulrico Hoepli. 1901.

SOCCORSI D'URGENZA. Pel Dottore Carlo Calliano, Dirett. della Scuola Samaritana d'Italia alla Sede Centrale in Torino. Quinta Edizione Riveduta ed Ampliata, con 6 tavole illustrative. Cloth. Pp. 368. Milano: Ulrico Hoepli. 1901.

MANUALE DEL MASSAGGIO. Del Dottor Romolo Majnoni, Dirigente alla Poliambulanza di Milano gia Chirurgo Assis ence al l'Istituto dei Rachitici. Con 54 Incisioni. Cloth. Pp. 179. Milano: Ulrico Hoepli. 1901.

HOW TO COOK FOR THE SICK AND CONVALESCENT. Arranged for the Physician, Trained Nurse, and Home Use. By Helena V. Sachse, Graduate of the Philadelphia Cooking School. Cloth. Pp. 239. $1.00 net. Philadelphia: J. B. Lippincott Co. 1901.

PROGRESSIVE MEDICINE, Vol. II, June, 1901. A Quarterly Digest of Advances, Discoveries and Improvements in the Medical and Surgical Sciences. Edited by Hobart Amory Hare, M.D., Professor of Therapeutics and Materia Medica in Jefferson Medical College of Philadelphia. Octavo, handsomely bound in cloth, 460 pages, with 81 engravings and one full-page plate. Issued quarterly. Price, $10.00 per year. Philadelphia and New York: Lea Brothers & Co.

LECTURES ON THE HISTORY OF PHYSIOLOGY During the Sixteenth, Seventeenth and Eighteenth Centuries. By Sir M. Foster, K.C.B., M.P., M.D., D.C.L., Sec. R.S., Professor of Physiology in the University of Cambridge. Cloth. Pp. 310. Price, $2.25. Cambridge: The University Press. 1901.

TRANSACTIONS OF THE AMERICAN ASSOCIATION OF OBSTETRICS AND GYNECOLOGISTS. Vol. XIII. For the Year 1900. Cloth. Pp. 337. Philadelphia: Wm. J. Dornan. 1901.

TRANSACTIONS OF THE ASSOCIATED PHYSICIANS OF LONG ISLAND. January, 1900, to June, 1901. Vol. II. Paper. Pp. 168. Rahway, N. J.: Mershion Co. Press.

PROCEEDINGS OF THE NEW YORK PATHOLOGICAL SOCIETY. February, 1901. Paper. Pp. 19. New Rochelle, N. Y.: Published by the Society.

PROCEEDINGS OF THE PATHOLOGICAL SOCIETY OF PHILADELPHIA. June, 1901. Paper. Pp. 196. Philadelphia: Published by the Society. 1901.

ANNUAL REPORT of the Milwaukee County Hospital for the Year Ending December 31, 1900. With the Medical and Surgical Statistics, the Rules and Regulations for the Government of the Hospital as Adopted by the Board of Supervisors, and the Prospectus of the Training School for Nurses, etc. E. C. Grosskopf, M.D., Superintendent. Paper. Pp. 111. Milwaukee: Edw. Keogh Press. 1901.

ANNUAL PRICE CURRENT Dyes, Paints, Oils, Drugs, Proprietary Medicines, Glass, Glassware, Chemicals, Chemical Products, Toilet Articles, Perfumery and Medicines. Peter Van Schaack & Sons, Wholesale Druggists, New York and Chicago. Cloth. Pp. 1166.

PROCEEDINGS OF THE NINTH ANNUAL MEETING OF THE ASSOCIATION OF MILITARY SURGEONS OF THE UNITED STATES, Held at New York City, May 31, June 1 and 2, 1900. Cloth. Pp. 514. Chicago: R. R. Donnelley & Sons Co. 1901.

FOURTEENTH ANNUAL REPORT OF THE STATE BOARD OF HEALTH OF THE STATE OF OHIO For the Year Ending Oct. 31, 1899. Cloth. Pp. 844. Columbus, Ohio: Fred J. Heer.

THIRD REPORT OF AN INVESTIGATION OF THE RIVERS OF OHIO As Sources of Public Water Supplies. By the Ohio State Board of Health. 1900. Cloth. Pp. 284. Printed from Fourteenth Annual Report of the Ohio State Board of Health.

THE SEVENTH ANNUAL REPORT OF THE BOARD OF MANAGERS of the Craig Colony for Epileptics at Sonyea, Livingston County, N. Y., Including the Report of the Medical Superintendent to the Managers. Paper. Pp. 99. The Craig Colony Press.

PROCEEDINGS OF THE PHILADELPHIA COUNTY MEDICAL SOCIETY, During May. Paper. Published by the Society. 1901.

The Public Service.

Army Changes.

Movements of Army Medical Officers under orders from the Adjutant-General's Office, Washington, D. C., June 20 to 26, 1901, inclusive:

John Carling, major and surgeon, Vols., having tendered his resignation, is honorably discharged from the service of the United States, to take effect July 3, 1901.

Charles M. Gandy, major and surgeon, U. S. A., former orders modified so as to direct him to proceed to Manila, P. I., in the transport *McClellan*, to sail from New York City, N. Y., July 10, 1901.

John H. Hess, dental surgeon, from Washington, D. C., to West Point, N. Y., for duty at the U. S. Military Academy.

Damaso T. Lainé, major and surgeon, Vols., recently appointed, relieved from duty in the Department of Cuba, to proceed to San Francisco, Cal., en route for service in the Division of the Philippines.

Appointments, promotions, and other changes in the regular and volunteer medical forces of the Army, reported from the Adjutant-General's Office, Washington, D. C., May 16 to June 15, 1901:

During the month ending June 15, 1901, the following promotions and other changes in the status of medical officers of the regular and volunteer forces were reported from the Adjutant-General's Office. Previous changes of this character were reported in the JOURNAL of June 8, 1901.

Deaths, Regular Army.—Major Edward Everts, retired, May 17, 1901, at Alameda, Cal.: Major Louis S. Tesson, surgeon, June 17, 1901, at Vancouver Barracks, Wash.

Appointments, Volunteers.—To be surgeons, with the rank of major: Captain John Carling, assistant surgeon, U. S. Vols., May 11, 1901: Damaso T. Lainé, of Cuba, May 27, 1901: Abram L. Haines of New York, May 27, 1901: Captain Simon J. Fraser, assistant surgeon, U. S. Vols., May 31, 1901: Captain Howard A. Grube, assistant surgeon, U. S. Vols., May 31, 1901. To be assistant surgeons, with the rank of captain: Meyer Herman of Louisiana, May 11, 1901: John Bilbert of Pennsylvania, May 10, 1901.

Honorably Discharged, Volunteers.—Major B. Albert Liebermann, surgeon, 33d Infantry, May 27, 1901: Captain William C. Berlin, assistant surgeon, 45th Infantry, April 20, 1901.

Mustered Out with Regiments, Volunteers.—Major Harold L. Coffin, surgeon, 39th Infantry, May 10, 1901: First Lieutenant Charles Fitzpatrick, assistant surgeon, 45th Infantry, June 3, 1901.

Commissions Vacated by New Appointments.—Major James D. Glennan, surgeon, 38th Infantry, May 11, 1901, by appointment as major and surgeon, U. S. Vols.: Major William B. Banister, surgeon, Vols., April 2, 1901, by promotion to major and surgeon, U. S. A.: Major Samuel C. de Kraft, surgeon, Vols., May 10, 1901, by appointment as major and surgeon, Vols., under the act of February 2, 1901: Major William D. Bell, surgeon, 42d Infantry, May 18, 1901, by appointment as major and surgeon, U. S. Vols.: Captain Isaac W. Brewer, assistant surgeon, May 20, 1901, by appointment as major and surgeon, U. S. Vols.: Captain George P. Peed, assistant surgeon, May 15, 1901, by appointment as major and surgeon, U. S. Vols.: Captain John Carling, assistant surgeon, May 17, 1901, by appointment as major and surgeon, U. S. Vols.

Mustered Out of Service.—Major Charles F. Mason, surgeon, and Captain Richard S. Griswold, assistant surgeon, 26th Infantry, May 13, 1901: Major Charles L. G. Anderson, surgeon, and Captain Joseph L. Sanford, assistant surgeon, 29th Infantry, May 10, 1901: Major Frank E. Artand, surgeon, 45th Infantry, June 3, 1901: Major William Cogswill, surgeon, and Captain Henry H. Lee, assistant surgeon, 46th Infantry, May 31, 1901.

Navy Changes.

Changes in the Medical Corps of the Navy, week ended June 29, 1901:

P. A. Surgeon E. M. Shipp, detached from the *Michigan* and ordered to the Asiatic Station by vessel sailing from San Francisco, July 15.

P. A. Surgeon W. B. Grove, detached from the Naval Hospital, Norfolk, and ordered to the *Michigan*, June 28.

Assistant Surgeon G. C. Smith, detached from the *Vermont*, and ordered to temporary duty on the *Alvarado*, July 1.

Assistant Surgeon H. M. Tolfree, ordered to the *Vermont* as the relief of Assistant Surgeon G. C. Smith.

Assistant Surgeon J. S. Taylor, detached from the *Manila*, and ordered to the Naval Hospital, Yokohama, Japan.

Assistant Surgeon W. H. Bucher, commissioned past assistant surgeon, from April 15, 1901.

Drs. R. T. Atkinson and A. W. Balch appointed assistant surgeons in the Navy, from June 22, 1901.

P. A. Surgeon R. S. Blakeman, ordered to the Naval Hospital, Norfolk, Va.

Marine-Hospital Changes.

Official list of the changes of stations and duties of commissioned and non-commissioned officers of the U. S. Marine-Hospital service for the seven days ended June 27, 1901:

Banks, C. E., surgeon, granted leave of absence for two days.

Hastings, Hill, assistant surgeon, to proceed to San Diego, Cal., for special temporary duty.

Adams, E. B., acting assistant surgeon, granted leave of absence for three days from June 23, 1901, on account of sickness.

Bailey, C. W., acting assistant surgeon, granted leave of absence for ten days from June 21.

BOARD CONVENED.

Board convened to meet at Washington, D. C., June 27, 1901, for the physical examination of applicants for the position of engineer officer in the Revenue Cutter Service. Detail for the Board: Past Assistant Surgeon H. D. Gaddings, chairman; Past Assistant Surgeon J. E. Greene, recorder.

Health Reports.

The following cases of smallpox, yellow fever, cholera, and plague have been reported to the Surgeon General, U. S. Marine-Hospital Service, during the week ended June 29, 1901:

SMALLPOX—UNITED STATES.

California: Los Angeles, June 15-22, 1 case.
District of Columbia, Washington: June 15-22, 1 case.
Indiana: Evansville, June 22, 1 case.
Louisiana: New Orleans, June 15-22, 3 cases, 1 death.
Kentucky: Lexington, June 15-22, 1 case.
Massachusetts: Fall River, June 15-22, 6 cases; Fitchburg, June 1-8, 1 case; New Bedford, June 15-22, 1 death; Quincy, June 15-22, 1 case.
Michigan: Detroit, June 15-22, 2 cases; Grand Rapids, June 1-22, 8 cases.
Missouri: St. Louis, June 8-16, 34 cases.
Nebraska: Omaha, June 15-22, 5 cases.
New Hampshire: Manchester, June 15-22, 1 case.
New Jersey: Newark, June 15-22, 2 deaths; Jersey City, June 16-23, 2 cases.
New York: Buffalo, June 19, 1 case; Elmira, June 15-22, 1 case; New York, June 15-22, 60 cases: 20 deaths.
Ohio: Cincinnati, June 14-21, 4 cases; Cleveland, June 14-21, 24 cases.
Pennsylvania: Lebanon, June 15-22, 9 cases; Philadelphia, June 15-22, 2 cases.
Rhode Island: Providence, June 15-22, 1 death.
Tennessee: Memphis, June 14-21, 8 cases.
Utah: Salt Lake City, June 15-22, 2 cases.
West Virginia: Wheeling, June 15-22, 1 case.
Wisconsin: Green Bay, June 16-23, 1 case.

SMALLPOX—FOREIGN.

Canada: Stanbridge, June 6, present.
Columbia: Panama, June 10-17, 6 cases.
France: Paris, June 1-8, 24 deaths.
Germany: Hamburg, June 1-8, 2 cases.
Great Britain: Glasgow, June 7-14, 18 cases, 1 death; Liverpool, June 1-8, 1 case; London, June 1-8, 1 case.
Greece: Athens, June 1-8, 1 case.
India: Bombay, May 21-28, 8 deaths; Calcutta, May 18-25, 25 deaths; Karachi, May 19-26, 10 cases, 6 deaths.
Italy: Messina, June 1-8, 16 cases, 1 death.
Russia: St. Petersburg, May 24-June 1, 11 cases, 6 deaths; Warsaw, May 18-25, 7 deaths.
Spain: Corunna, June 1-8, 1 death.
Straits Settlements: Singapore, May 4-11, 1 death.

YELLOW FEVER.

Costa Rica: Port Limon, June 13, 1 case.

CHOLERA.

India: Bombay, May 21-28, 3 deaths; Calcutta, May 18-25, 65 deaths.

PLAGUE.

China: Hongkong, May 11-18, 122 cases, 113 deaths.
Egypt: Miniet, June 3, 2 cases: Zigazag, June 3, 1 case.
India: Bombay, May 21-28, 192 deaths; Calcutta, May 18-25, 47 deaths; Karachi, May 19-26, 112 cases, 107 deaths.
Japan: Formosa, May 21, 41 cases, 29 deaths.